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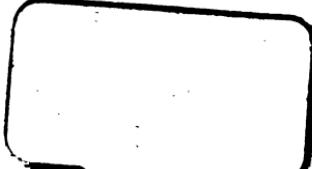
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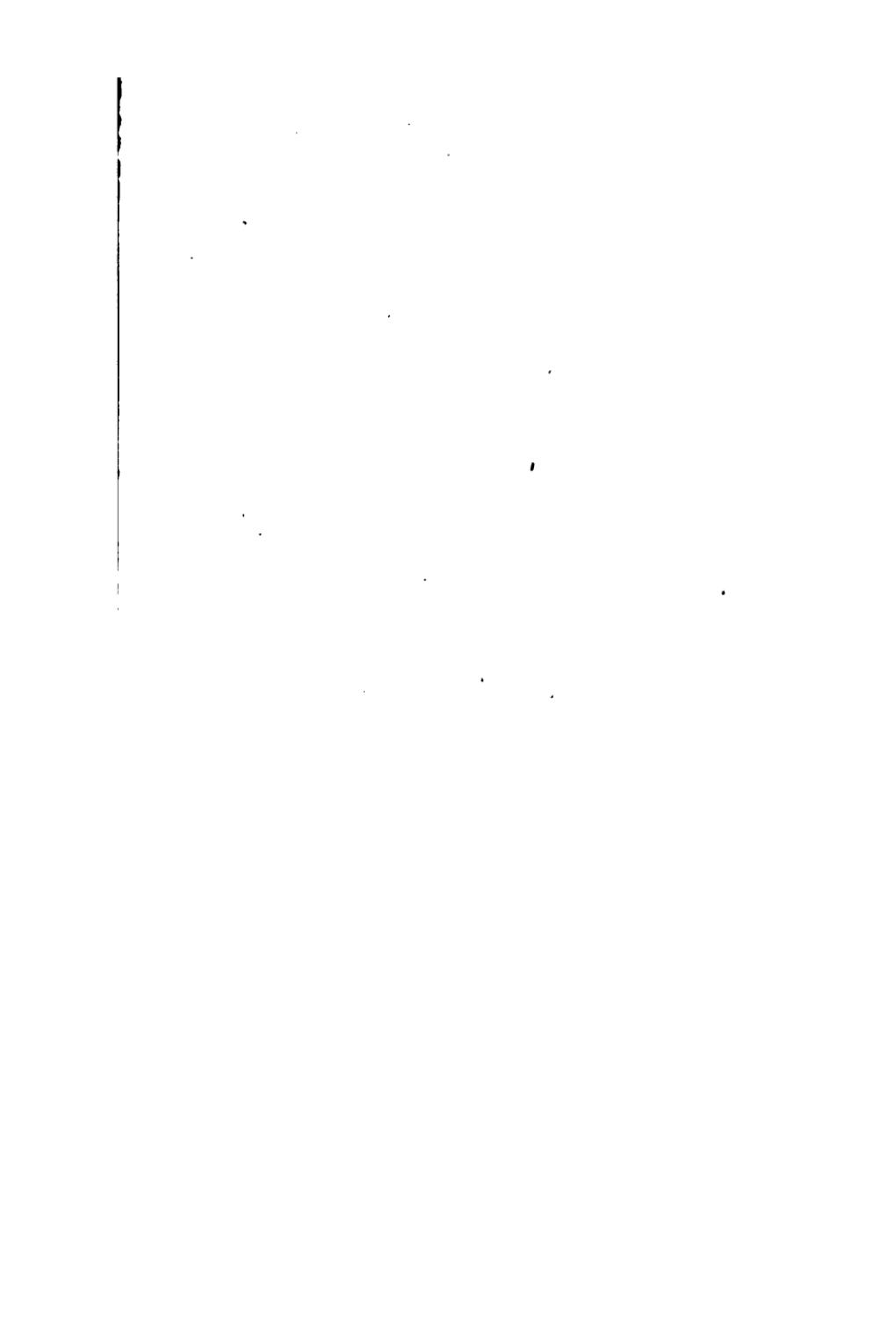
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THE  
PATHOLOGY  
OF DRUNKENNESS.



THE  
**PATHOLOGY OF DRUNKENNESS**

A VIEW

OF THE  
**OPERATION OF ARDENT SPIRITS**  
IN THE  
**PRODUCTION OF DISEASE;**

FOUNDED ON ORIGINAL OBSERVATION, AND RESEARCH.

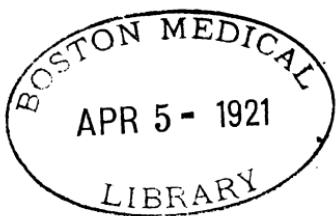
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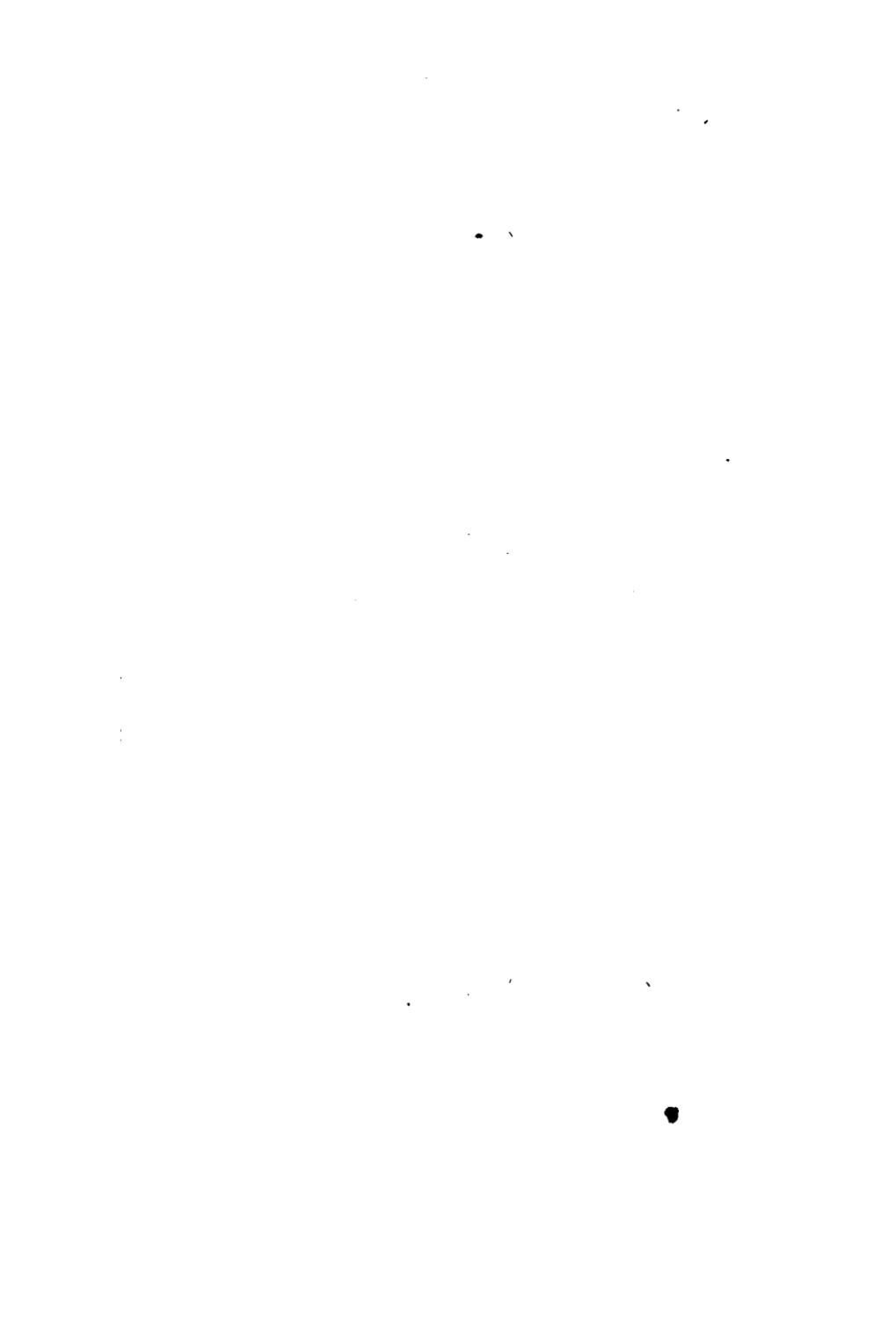
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D. FRANCISCO MANUEL DE MELO.

*"If you seek the truth, I invite you to read; if nothing more than pleasure and complaisance, shut the book, well content that I have undevceived you so timuously."*



## P R E F A C E.

THERE are few themes which ought to be approached with greater caution, even where desiring to address the general world, than that which treats of the effects, upon the human constitution, of the use and abuse of intoxicating drinks. And, still more, to paint the horrors of intemperance, and to shew the risk attendant even on what is usually termed conviviality, without incurring the charge of exaggeration and asceticism, on the part of those who themselves enter keenly into what they term the pleasures of society, must be always a difficult, if it be not an impossible task. But, indeed, the real evils of intemperance are in themselves so vast and flagrant, that to add a single trait to them which truth could not substantiate as peculiarly and especially their own, would be, at all times, as unnecessary, as it would, in a certain sense, be dangerous ; for, as the drinker, to preserve the least shade of con-

sistency, must necessarily be a sophist, till his fate convict him of his folly, that disproof which he could bring against any single part of our argument would be urged as availing against the whole, and we should but secure to him an appearance of triumph, by an overstrained effort to convince and to deter.

It will be no part of the selected province of the Author of the following essay, to view his subject in its moral aspects, though he admits these to be momentous and appalling ; neither can he have any close concern with its relations to our social system, or its influences upon the growth of civilization, the sanctities of religion and justice, or the progress of human institutions, though these also are complicated, vast, and widely ramified, to an extent far beyond what can be meagrely represented by the naked figures of the statistician. Leaving such topics to constitute, as they well merit, the grounds of distinct inquiries, his attention will be exclusively directed to the action of intoxicating fluids upon man as a living organization ; and to the examination, within the strict circle of facts, of their influence upon his state of sanity, whether mental or bodily ; adding only a few remarks on the topic of prevention, which

may be admitted to fall peculiarly within the province of the physician, and which it would be unjust to consider upon any narrow basis.

Early induced to direct attention thitherward, the frequent opportunities for observation and reflection on such matters, which have been painfully forced upon him during a professional experience in the treatment of disease of upwards of a quarter of a century, as well as some diligence bestowed in substantiating his conclusions by reference to the writings of the judicious and accurate observers of our own country, and, even to a greater extent on this special topic, of most of the cultivated nations of the continent, seem to offer him the hope of being able to excite, if not the interest of novelty, at least that kind of interest which attaches itself to everything that bears the stamp of universal truth. It is trusted, therefore, that he may be permitted to call attention to the circumstance, that this little treatise, while nothing has been admitted in it which is not directly consistent with his own experience, may advance some claim towards representing also the results of a far wider circle of recent observation ; which, with more labour than

may be at first apparent, have been gathered and condensed from immediate reference to diversified sources. Many of these he has indicated in the tenour of his remarks, glad to be sustained by the common voice of civilization: an accumulated authority which was not necessary to persuade many, to whom everything was already so manifest, but which may be required to outweigh his own deficiencies, and to remove the apathy or the doubts of others. If, then, the details which are to be presented be uniformly humiliating, not unfrequently loathsome, and sometimes even terrible, the grounds for this shall not lie in any attempt to heighten with unnatural colours, but in the calm and simple expression of that which experience has long taught, and, unhappily, still teaches, every day and in every direction.

The observations, as may be judged from their tenour, are by no means addressed to the uneducated, or to the imperfectly educated, exclusively, for they are not the sole victims. It is even hoped that, concise as they have been designedly rendered, the younger members of the Author's own profession may find epitomized in them a broader and more

general view of the *direct* effects of intemperance, sustained by a more dense accumulation of fact, and a wider reference to authority, than can be easily met with elsewhere. Still, in a series of observations which would fail to fulfil their object, if they did not adapt themselves, in a large degree, to popular use and instruction, it is, of course, necessary to avoid entering fully into any details of an abstract, or purely scientific description ; as well as to embody the various facts and precepts delivered, in language as completely divested of technicalities as the proper discussion of the subject will admit. To accomplish this, shall be the aim of the writer throughout the following remarks : and his ambition will be gratified should he be sometimes able to induce the intelligent reader to admit, that he has succeeded in being clear without shewing himself superficial ; just as, with far greater ease, he might have been obscure without proving himself profound. Should he be fortunate in engaging attention at the commencement of his remarks, it will be his endeavour to bear it along with him to their close : with the hope of producing not merely a persuasion, but a well grounded conviction, of that which he seeks to demonstrate.

Above all, desiring to testify the utmost respect for those who have preceded him, in this country and elsewhere, in efforts of a similar description, he trusts there are others to follow who shall paint yet more truthfully and earnestly the evils of the vice of intemperance, till the public mind revolt at its existence, with that general contempt and disgust which must prove the only sure forerunners of its annihilation. Humanity, whether for its honour or its advantage, can desire no happier consummation.

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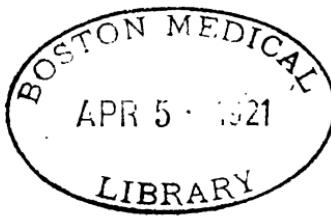
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## CONTENTS.

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	PAGE
CHAP. I. ALCOHOL: MEDICAL HISTORY, . . . . .	1
II. CONVIVIALITY, . . . . .	15
III. CASUAL INTOXICATION, . . . . .	26
IV. HABITUAL INTOXICATION: CAUSES, . . . . .	38
V. HABITUAL INTOXICATION: PROGRESS, . . . . .	52
VI. SPECIAL RESULTS: CONSTITUTIONAL, . . . . .	67
VII. SPECIAL RESULTS: MENTAL, . . . . .	110
VIII. SUICIDE, . . . . .	136
IX. PHYSIOLOGICAL PATHOLOGY, . . . . .	149
X. PREVENTION AND CURE, . . . . .	194
INDEX, . . . . .	221





THE

## PATHOLOGY OF DRUNKENNESS.

### CHAPTER I.

#### ALCOHOL—MEDICAL HISTORY.

IT is to the credit of former civilization, that habits of drinking to excess never prevailed extensively among the more cultivated nations of antiquity. Although both the Greeks and Romans possessed wines of the most racy qualities, with the intoxicating effects of which they were, and could not fail to be, familiar, we have yet the fullest evidence, that their manly sense rarely permitted them to degrade themselves by their abuse. We gather from their moralists, as well as from their poets and satirists, that the inebriety, which they did not fail to stigmatize, was merely the casual vice of individuals, and not the characteristic depravity of whole classes; and that to drink wine undiluted was, for the most part, accounted disreputable, while the degree of its dilution was usually very considerable. It is worthy of being noted, however, that those allusions to intemperance which we possess among the ancient writers become at once more distinct, and more extended in their application, as we



approach the period of the declension of the general virtues, as well as of the pre-eminence, of the Roman people. What Lucretius<sup>1</sup> paints with a few graphic touches in the individual, Seneca<sup>2</sup> shews more plainly in certain of its closer relations to society; while, in Juvenal, if the picture be less minute, and its traits be less directly grouped, they have become meaner and more loathsome.

But what is more to our present purpose, the medical writers of Greece and Rome, distinguished as they were, especially the former, as accurate observers, dwell little on the subject of intemperance and its influence in the production of diseases; although a close attention to the effects of diet and regimen justly occupied a principal place in their recorded observations. It is true that Hippocrates, in his second book on diseases, which is, however, of doubtful authenticity, appears to distinguish intoxication as the efficient cause of a peculiarly fatal form of apoplexy: and, in the fifth section of the fifth book of Aphorisms, he speaks of the danger of convulsions which may arise from a similar source; an observation which has been transferred by Celsus to the second book of his celebrated treatise. But even if we add to these the case of Charion, which is the fifth of those narrated in the third book of Epidemics, and the features of which suggest to us its identity with the delirium tremens, or shaking delirium of drunkards, we have still, in a series of facts so scanty, only a further proof of the slight importance which the habits of the times permitted the me-

<sup>1</sup> *De rerum natura*: Lib. III. vv. 475-9.

<sup>2</sup> *Opera omnia: Epist. xxiv. lxxxiii.*

dical observer to attach to intemperance as a leading cause of disease. We may safely infer, therefore, that what was not lashed as a prevailing vice by the satirist, or noticed as a habit prejudicial to health by the physician, and which could not have escaped both if it had existed in any prominent degree, must have been really of very rare occurrence, even if we were not in possession of more direct testimony to a similar purport.

We must therefore be content to claim for the habits of intemperance which are now so prevalent amongst us, a less illustrious origin than from among those ancient leaders in the arts of peace and of war, many of the works of whose purer times and better genius have descended to us, as worthier memorials, still unrivalled in that excellence which has conferred their title to immortality. It is even deserving of remark, that those nations which have the best claim to be considered as their direct descendants, have inherited from them, in a large proportion, this virtue of temperance, if in many other respects they may be held to have degenerated. And yet, even in Italy itself, there appears reason to fear that this commendation may become less and less merited; several eminent Italian authors speaking of habits of intemperance as a rapidly increasing evil. In the great, and still, in many respects, unrivalled work of Morgagni, cases, displaying the deplorable effects of intemperance, are strewed everywhere among the results of his experience; while in recent times, Giacomini<sup>1</sup> complains, in strong and feeling language, of the habit as continually extending more and

<sup>1</sup> *Traettato Filosofico-sperimentale dei Socorsi Terapeutici: Opere*, vol. iv. p. 300.  
Padua, 1853.

more widely among the populace, so that the memories of all medical observers were full of examples of its ruinous effects. And Speranza,<sup>1</sup> besides stating his own experience of the large proportion of diseases of the digestive organs, arising from the use of spirituous liquors, quotes also that of Perrone, of Naples, as to the frequent occurrence of fatal maladies, the fruits of drunkenness, among the lower classes of that city. But it is doubtless to the great Teutonic family, from which we derive the larger portion of our mixed descent, that we owe the unhappy inheritance of our propensity to the use of intoxicating liquors. With the primitive Germans, as described by Tacitus, in traits which are everywhere revived to us in the later, though still remote, traditions of that hardy people, it was considered no reproach to pass night and day in continuous drinking ; and these revels, he tells us,<sup>2</sup> were rarely terminated without strife or bloodshed. It appears that the temperate Romans knew how to bring this propensity into subserviency to their ambitious aims ; for the historian adds that, if the barbarians were indulged in their drunkenness, by placing the materials, usually a kind of ale prepared from grain, within their reach, it was not less easy to conquer them by their vices than by the sword.

The traditions of the Scandinavians, a branch of the Teutonic race occupying necessarily a conspicuous position in the early history of this country, bear frequent witness to a like proneness to habits of intoxication. In the interesting memorials embodied by Afzelius<sup>3</sup> in his

<sup>1</sup> *Storie e Riflessione: Raccolta di Opere Mediche Moderne Italiane*, t. v. p. 244.

<sup>2</sup> *De Moribus Germanorum*, c. xxii., xxiii.    <sup>3</sup> *Svenska Folkets Saga-häfder*, D. I.

work on Swedish traditionary history, and in other publications of a similar character, examples abound throughout of the vicious extent to which drinking customs were carried by the northern nations. Dangerous rivals were treacherously got rid of, by supplying them with liquors till they were reduced to insensibility; when the hall, usually a wooden edifice, in which they had been entertained, was set on fire, or they were otherwise slaughtered. Wilful self-destruction was perpetrated by first getting drunk, and then committing the suicide. To appoint a marriage, was to fix a day on which the "wedding was to be drunk;" to enter upon an inheritance was to drink the heritage ale; and to drink the funeral-ale, was but another way of naming the ceremony of burial. It is interesting to observe the progress of these customs, as they appear first with the stern and rude features of unmitigated heathenism, and then acquire a new character from the introduction of Christianity; which, however, seemed for long to act rather by lending a variety to their outward expression, than by softening the harshness of their reality. Thus, in the account of the "*Heitstren-ging Jomsvikinga*," chronicled by Snorro Sturleson,<sup>1</sup> which occurred at the drinking of the heirship-ale of King Sveinn, we find that the first bowl was drained by the king and his guests to the memory of his father, the second to Christ, and the third to St Michael. For all these, and for other pledges, the strongest cups were given to the "Jomsburg Vikings," who were thus induced, under the influence of the liquor, to offer vows of extraordinary and ruthless service to the monarch; to

<sup>1</sup> Johnstone, *Antiquitates Celto-Scandicae*, p. 78.

find, however, on the following morning, when the fumes of the intoxication were dissipated, that they had "pledged themselves to more than enough." In these and in after times, associations termed "Gilds," the drinking practices of which were their leading characteristics, were customarily established in honour of certain saints, by whose names they were designated ; and in such assemblies whole days and nights were occupied with games of chance and drunken revels, that saint being the most honoured whose votaries lowered themselves to the uttermost depths of intoxication. The same tendencies to an organised debauchery reappear as late as the reign of Charles XI. of Sweden ; the association designated "*les Goinfres*," affording a conspicuous example. These customs were shared by the Anglo-Saxons, as a closely kindred branch of the Teutonic family ; and have thus approached us by a double descent, still to linger amongst us under a variety of aspects, according to the varieties of station, as well in the entertainments connected with matters of public interest, as in our unceasingly recurring occasions of petty service, of private festivity, or even of mourning.

The proofs of the addictedness of the German races to intemperance are sometimes discoverable in situations, and under forms, which we could scarcely have anticipated, but the very existence of which shews how deeply the pollution had insinuated itself into every recess of the social system. St Gertrude, a canonized lady of the noble house of the Counts of Hakeborn, and superior of a convent of nuns, doubtless saw no impropriety in selecting, in the thirteenth century, the following language as

fitly expressive of her devout enthusiasm :—"Oh gift, above all gifts, to be so satiated in the storehouse of the spices of the Godhead, and to be so supremely drunk in the pleasant wine-cellar of divine love, yea so thoroughly drunk, that it is impossible to stir a foot!"<sup>1</sup> If it be here too rigid to term that profanity, which was far more probably an expression of really pious ardour, in one whose genius did not rise high enough to refine her tastes beyond those of her era, we shall scarcely be able to employ a similar excuse in behalf of our own more celebrated Walter Mapes, a church dignitary of Oxford in the eleventh century, whose modes of expression, assuredly far more directly the offshoots from the cellar and the tavern, were only the more significantly profane, because adorned with the graces of taste and ingenuity. To approach nearer our own times, how much more consistent, and how suggestive, is the simple record, most expressive in its simplicity, of the worthy Edward Burghall, vicar of Acton :—"1631. This year five aldermen of Macclesfield met at a tavern, and drank excessively of sack and aquæ vitae: three of them died the next day, and the other two were dangerous sick. Oh that drunkards would learn to be wise!"<sup>2</sup>

Towards the close of the fourteenth century, a landgrave of Hesse is said to have instituted a kind of temperance society, the rules of which were certainly anything but austere, as they merely restricted its members to the ration of seven bumpers of wine along with each meal. Computing the bumper, according to the old ideas

<sup>1</sup> Zimmermann, *Von der Erfahrung in der Arzneykunst*, 8te Auflage, p. 486.

<sup>2</sup> *Edu. Burghall's Providence Improved: Diary from 1628 to 1662.*

of the word, at only a sixth part of a quart, and the meals at two daily, we have still upwards of two quarts as the stated allowance for each day. Yet even two centuries later, the Germans had much vaster notions of what might be the proper extent of a bumper, to which effect numerous proofs are still extant. In the palace at Lachsenburg, near Vienna, for example, there is a crystal tankard which may hold about half a gallon, upon which is to be deciphered an inscription in antiquated German, inviting the guest to drink, and leave not a drop in the vessel. It could only be in times, therefore, of unparalleled grossness, that such license could assume the name of restriction; and we are almost at a loss to determine whether history is in jest or in earnest, when it hands down to us these and similar traits of the "good old times," whose best recommendation now seems to be that they are past. And yet, in so far as relates to drinking habits, there seems, even at this day, too much reason to suspect that we are entitled to boast of no greater improvement, than that what was, in many instances, done openly and boastfully then, is practised secretly and evasively now; and that we have only succeeded in removing the taint from our manners to allow it to sink the deeper into our morals.

It would be inconsistent with our object to dwell longer on these curious illustrations of the manners of our progenitors, and of their congenerous races; but it is at least a fact, which we are entitled to deduce from them, and which surely well deserves to be held in remembrance, that it is from ancient barbarism, and not from ancient civilisation, that we inherit our propensities for

intoxicating fluids; and that it is the vice of the savage which still diffuses its taint amongst us, yet without the excuse of the savage, who could possess the lights neither of pure religion nor of education, to direct him in a safer course.

Much, certainly, has been attributed by many enquirers, and, among others, by the eminent Montesquieu,<sup>1</sup> to the influence of climate in promoting the virtue of temperance; which would thus fall to be considered rather as evolved as an accident, than nourished into strength as a duty. Go from the equator, they tell us, to either pole, and drunkenness, the vice of a cold climate,<sup>2</sup> will be found to increase with the degree of latitude. But statements of this kind, not wholly unfounded and specious as they appear, are often made with too great absolute-ness, and to the neglect of that principle which is always true in nature, and therefore true in science, that neither natural phenomenon, nor natural effect, has ever been found to depend for its being on a single condition or a single cause. If climate were thus paramount, and could act independently of propensities inherent in race, or developed by culture, how comes it that in those inter-tropical or closely adjacent countries, where the Teutonic races have supplanted the indigenous population, and in some of which they have been now settled for centuries, the vice of intemperance has not only accompanied them thither, but has propagated itself frequently to even a

<sup>1</sup> *Esprit des Lois*: L. xiv. c. x.

<sup>2</sup> The Sclavonic nations, as also the Fins and Laps, seem, for the most part, still more thoroughly imbued with the propensity to drunkenness than the Teutonic races, though with something like an excuse, in their generally lower grade of knowledge and civilization.

more flagrant extent than among the parent stock? In the West Indies, in the southern territories of the United States, on the coast of Africa, in Hindostan, in Australasia, we have the most extensive proofs that drinking habits can be too easily rendered consistent with warmth of climate, among those natives of the soil, though of European extraction, whom training and example have initiated in the vice. On the other hand, when there has not been this substitution of race, and where an invading tribe, temporarily dominant, has been absorbed into an indigenous people of more advanced civilization, and, though feeble in arms, existing in a large majority, the vicious customs peculiar to the conquerors have disappeared also, or have been elevated by approximation to the relatively higher standard. Thus the Franks were absorbed into the Neustrian Gauls; the Goths, Vandals, and Lombards, all of Teutonic origin, into the population of Italy; and the Suevi and Visigoths into that of Spain: and in this way, doubtless, has been preserved in these countries that comparatively, and, for the most part, only comparatively, higher grade of sobriety which still subsists; but which, in even warmer climates, and with another race dominant, has been miserably lost. Neither are we to forget wholly, that even those of the earlier indigenæ of warm climates, who were secluded by religion or custom from indulgence in vinous liquors, had yet their own peculiar means of intoxication in the opium and hemp so extensively in use among them; while, as to others, they have in many instances shewn themselves but too prone to imitate the vice of their new masters.

Wine, and fermented drinks prepared from grain, it is

scarcely necessary to mention, were the liquors which, during remote antiquity, served the purposes of the drunkard. But an important era in the annals of intemperance was approaching, and we have some assurance that, as early as in the eleventh century, the preparation of alcohol, or spirit of wine, was known to the Arabian physicians. Its first discoverers announced the new liquid as possessing healing and vivifying qualities of the most pre-eminent description; and the name of aqua vitae, or water of life, was blindly attached to that, which after experience has shewn would have been far more justly designated as the water of death. It was still long, however, before there was scope for appreciating all the pernicious effects of the product of art, the creation of which was thus exultingly promulgated. Used exclusively as a medicine, and prepared only in small quantities, it was little known in Europe beyond the limits of the sick room, and sparingly even there, till the period of the fourteenth century; when Arnold of Villanova, a distinguished physician, at a time when distinction scarcely implied merit, gave a fresh impulse to its reputation, and conduced to its wide adoption as a remedy in disease.<sup>1</sup> The popular faith was easily conceded, where it was in unison with the popular inclination; and a remedy which ingratiated itself by the seductiveness of its effects, if not always deserving of confidence, was sure at least of a general reception. The enthusiasm, thus delusively sustained, was not likely to suffer any restraint from the exercise of that reason upon which it had not been founded. It was, therefore, but a natural

<sup>1</sup> *Arnaldi Villanovani, Praxis Medicinalis*, pp. 84, 85.

step in the progress of the reputed elixir, to find alleged for it a farther power, not only of curing diseases, but of preventing their occurrence; and the willing votaries acquired thus an unfailing pretext for an indefinite amount of indulgence. At length all pretext was abandoned, or remained only as a shadow of the original persuasion; and intemperance entered into the full possession of a new element, better adapted for its orgies, and therefore infinitely more dangerous, than those which it had superseded.

Spirit of wine, as is universally known, and as its name implies, was originally prepared by distillation from the wine of the grape, or from its juice, or from wine-lees. Hence also its German name of Branntwein, or burned wine, of which our term brandy is the obvious modification. It was subsequently discovered, however, that it could be prepared from any substance containing sugar, or starch which the process of malting could convert into sugar, and which could be subjected to the process of fermentation. The manufacture of spirits now received a prodigious extension, and all kinds of grain, several kinds of fruits, and other vegetable substances, especially potatoes, were employed in its preparation; the product usually receiving some special name to indicate the particular source from which it had been derived. All the varieties are subject to many adulterations; but as these, for the most part, consist really in the admixture of a small portion of what is less pernicious, with a larger portion of that which is more pernicious, the offence seems to pass for something very venial with those who are its perpetrators; and is still, at least, unquestionably

largely practised by many dealers whose reputation remains unchallenged. The purity of spirits, however, may be held as generally denoted, if they be clear and perfectly transparent, colourless, having no acrid, sour, pungent, oily, or burnt flavour, and if they be without offensive smell. That the liquor should present pearly globules on its surface when agitated, may cease to be admitted as a sign of either purity or strength, for alcohol itself does not "pearl." To produce this fancied criterion of excellence, vintners and traders are said to mix one part of oil of vitriol with three parts of oil of poppies, or olives, into what is called "sour soap," and to beat this up with spirit until it is dissolved. This solution is then added to other spirits in the desired proportion.<sup>1</sup> When set on fire, spirits should consume with a bluish flame, and the watery residue should present no unpleasant flavour. Most of the adulterations may be easily detected; but in no point of view are any of them of such importance, in relation to our subject, as to render it necessary that they should become the topic of any particular consideration.

In whatever form the inebriating beverage may be consumed, it is the alcohol, or spirit of wine, which constitutes the intoxicating ingredient. But that fluid cannot be received into the stomach, in its undiluted state, even in no large quantity, without the production of immediately fatal consequences. In most of the varieties of spirits, in ordinary use, it necessarily exists, therefore, in combination with a little more than an equal proportion of water; with the addition of that peculiar volatile oil

<sup>1</sup> Friedrich, *Ueber Handels-und Gewerbobjekte in Beziehung auf Veruechtung, &c.* 1858, pp. 88, 98.

to which each is indebted for its characteristic flavour, but the presence of which otherwise has no material tendency to modify its action. While taking a comprehensive view, therefore, of the effects of intemperance on the living organization, it will not be necessary to enter into any particular examination of the influence of each distinct variety of potion, because the essential operation of all is attributable to a single source. There are, unquestionably, minor modifications of action, which would be well deserving of attention in a more extended enquiry, but which would be out of place here, where the design is to aim only at an exposition of truths of the most direct application, and to present these in such a plain and uncomplicated form as may secure their comprehension. Besides, the excessive drinker rarely proceeds far in his career till he becomes literally a spirit-drinker, and ceases to be content with those milder liquors in which the alcohol exists only in combination. Thus it will be consistent with the proper treatment of the theme of this essay, should it be restricted to an almost exclusive consideration of the effects of alcohol on the human constitution.

## CHAPTER II.

### CONVIVIALITY.

WE are rarely allowed long to forget the familiar remark, repeated through all ages, that neither vice nor depravity ever attains suddenly to the fulness of its growth. The first departure from a career of prudence; or of virtue, is generally so faintly marked as almost to escape detection; and there may be even something at the commencement like an air of amiability, in the laughing defiance which youth, or a spirit of gaiety, offers to the rules of that rigid morality, the transgression of which, in certain forms, half the world has agreed to consider venial, or to view only as glossed by those lures and graces, with which it is prodigally invested by poetry and song. But it is well for the incautious wanderer when he again instantly recedes within the limits which he may have heedlessly overpassed, before familiarity with the evil has diminished his fears, while it has increased his danger.

It would be merely ridiculous to deny the force of that temptation, to which so many have fallen victims. The effects of intoxicating liquors, when taken in moderate quantity, are unquestionably of so pleasing a nature, that we cannot wonder that he who has once tasted should be willing to repeat the draught; while even the

most severe might be inclined to admit that, if their consequences never went beyond their first enlivening influence, it might be just to tolerate them. An immediate result is the diffusion of an agreeable warmth throughout the system; the action of the heart is invigorated, and the circulation quickened; the voice becomes full and sonorous; the eye sparkles; every function appears to have acquired new energy; and every motion is accompanied with a consciousness of elasticity and vigour. The effect upon the mind varies with its previous condition. If it have been chafed, it is soothed; if depressed, it is restored to equanimity; if calm, it is exhilarated; and if it have been previously cheerful, it is excited into irrepressible gaiety. The intellect also shares in the vivifying process, and the imagination fascinates by the brightness and variety of its images. The perceptions are prompt and clear; and the judgment, dealing with these and with the recollections which memory lays before it with unwonted distinctness and readiness, arrives at its conclusions, at least on ordinary topics, with an accuracy as remarkable as the rapidity with which the process is completed, and, where necessary, advanced into action. It is but a natural result of this, that the individual should be usually pervaded by a feeling of self-complacency with reference to his own condition, as well as by an expansive benevolence towards others, evincing itself readily in prompt sympathies, and in acts or expressions of kindness; while he is imbued, beyond this, with a confidence which seems to render him fit for all emergencies, and to smooth away all difficulties.

But this temporary exaltation, as it rests upon nothing real, either within him or beyond him, can have no other than a fleeting existence. The vigour can sustain him through but a short effort, and the elation, if it be extreme, is transitory. If he is capable of a prompt and strenuous muscular exertion, it is instantly exhausted. Neither, while we have been describing the effects of only a moderate quantity received into the healthy system, must it be forgotten, that it is by no means always, nor for a long succession of times, that such results can be anticipated. The exhilaration, which has been excited at first by very limited potations, soon requires deeper and deeper draughts for its production ; while the subsequent depression which is sure to follow, and generally in strict proportion with the previous elevation, becomes ever more and more strongly marked. Thus, at the very outset, the sense of enjoyment of him who partakes even sparingly of spirituous liquors has neither basis nor duration : it would be well if no heavier fate awaited him who courts it, than that which usually attends those engaged in the pursuit of a shadow. But to bring the boon-companion to timely reason, is usually a difficult, and often a fruitless task. He has always a flippant, and sometimes a well-conceived jest ready to oppose to the advocate of temperance, which is received with the laughing applause of his associates, and has even the assent of a smile from many who are still beyond the giddy circle, and consider themselves safe from its vortex ; a safety which every humane spirit must desire earnestly, but too often vainly, to prove neither deceptive nor unenduring.

But the danger of seeking enjoyment from such sources is not confined to the tendency which it creates of entering into farther extremes, with the hope of securing its persistence. Even the moderate use of spirituous or fermented liquors, if long continued, and grown habitual, cannot fail to have ultimately a prejudicial effect upon the health; while it may be confidently asserted, that there are no circumstances, of ordinary occurrence, under which it can be justified as beneficial or necessary. The undue stimulus to the stomach, caused by its frequent reception within that organ, disturbs and weakens the function of digestion. The excitement of the circulation, its most usual and necessary consequence, strengthens the tendency to disease of the heart, and of the large blood-vessels, as well as to apoplexy, both among the most frequent causes of sudden death. The disordered functions of nutrition, caused indirectly by its action on the stomach, and directly by its own absorption and diffusion throughout the system, contribute to the production of an ill-assimilated blood, and tend to attach new forms of danger to every description of disease or accident. Through the same agency, the skin becomes liable to disfiguring and troublesome eruptions; and gout, which is not always the penalty of the rich only, in its multiplicity of forms, either arises as a distinct disorder, or is ready to cause dangerous and stubborn complications with other affections. Neither is it less certain, that the same perpetually renewed excitement of the circulation, and perversion of nutrition, may or will give rise finally to changes of structure, and deposits of morbid matter within the internal organs, of a nature and extent incon-

sistent with the performance of their functions and the preservation of life.

On the other hand, where there is already a pre-existent tendency to any form of disease, lurking within the system, and awaiting only some accidental circumstance to call it into action, it must be evident how efficient a means would be here provided, and with how much more intense and rapid violence the mischief would be developed. Thus, if the vessel within the brain be distended, and its walls, through an alteration in their texture, just retain strength sufficient to restrain the blood within their bounds, a single throb of additional power may be enough to burst the barrier, and the noblest of our faculties, or life itself, be at once oppressed or extinguished. Least of all can it be doubted that, during the actual existence of manifest disease, in multi-form examples, the habitual use of spirituous liquors, however moderate, must aggravate the danger and the suffering, and either hasten the fatal result, or, under the most favourable circumstances, retard the cure. The effect is, in every instance, the more pernicious, if the stimulating liquors are taken in the morning, or at intervals between the repasts, and not received into the stomach when they can be mixed with its more solid contents, and so presented in a less direct and concentrated form. Not one of these conclusions can be reasonably resisted, springing thus from the consideration of the physiological actions of alcoholic drinks, as they evolve themselves in their most simple and primary form. When we pursue the subject farther, and the more palpable effects of their excessive use start before us in full

ripeness, this conviction will grow in intensity ; and the existence, and unquestionable origin of the greater results, will render it impossible for us to deny the less.

Under these views, it can scarcely be necessary to add, that the popular and unguarded use of spirits, as a preventive or a remedy for illness, has been often productive of the most prejudicial effects ; and it will be obvious that not even an apparent or occasional success, ensuing upon this practice, can give any safe warrant for its ordinary employment. It may, for example, be possible that the individual, who, after exposure to the weather, thinks that he recognizes in himself the symptoms which are the usual forerunners of an attack of illness, and has recourse to warm spirits and water with a view of warding it off, may escape the suffering he anticipated, and be inclined to ascribe the immunity to the draught : yet he has probably, at the same time, used other and more certain means of promoting perspiration ; and the simple effect of mere repose, with the heightened activity of the functions of the skin, has, in all likelihood, proved the efficient means of obviating the danger, if any were really threatened. But if, on the other hand, disease have actually set in, and especially, as must usually be the case under the circumstances we have imagined, if it be of an acute or inflammatory character, then unquestionably his draught must immediately expose him to a serious increase of danger. Not unfrequently, the harsher dose of undiluted spirits, mixed with pepper, has been resorted to under such circumstances ; and this has been also employed in fenny districts, as a popular remedy against ague. In wholly uncomplicated cases of

intermittent fever, it is assuredly possible that the system may tolerate such a remedy, and may even be provoked by it to such a state of re-action as may aid in throwing off the distemper. But if there co-exist here any important disorder of the digestive functions, or any of those tendencies to organic disease of the higher organs which so frequently complicate the malady, then not only will the fever remain unchecked, but the patient will incur the farther risk of inducing such attacks of jaundice, liver-disease, dropsy, obstinate diarrhoea, and sometimes of congestion of the brain, and even of apoplexy, as may challenge and defeat the most strenuous efforts or the most exalted skill. In another set of circumstances, an individual imagines that he recognizes, in the character of his sufferings, an attack of spasm from simple indigestion, and he hopes to remove it by a moderate cordial. But the symptoms may really denote the early stage of a dangerous form of inflammation, and his fancied remedy is not only the opportunity of safety lost, but a poison swallowed, fitted beyond most others to aggravate the malady. As to the imputed effects of ardent spirits, as a mere preservative against disease, where the initiatory symptoms are as yet neither felt nor directly threatened, it may be safe to assert, that there is nothing which is less based upon sound experience. That which increases the tendency to many diseases, and renders others already existing more violent and more dangerous, cannot be hoped, unless under rare circumstances, to be anywhere an effectual safe-guard.

Yet it is, of course, not intended to be denied absolutely, that there are emergencies, and peculiar conditions

of disease, or even of age and constitution, in which the moderate, or even the liberal use of wine or ardent spirits may be employed with the greatest advantage; and in which, indeed, no other known form of stimulant could be resorted to with the prospect of equal benefit, especially, and this should be well noted, in those who have not been previously habituated to their employment. Individuals more ardent than considerate, and proceeding upon a false induction, have contradicted this roundly: but there is no physician of experience who has not occasionally seen patients snatched apparently from the jaws of death, through this heroic remedy; for as such, under these circumstances, it well deserves to be designated. It was in advising the use of stimulants under some such circumstances, that the celebrated Wiseman, the patriarch of English surgery, concludes by a kind of apology:—" You may laugh at my pleading for them: but I hope you will consider I am a water-drinker the while."<sup>1</sup> But the use of stimulants in all cases, in the habitual drinker or in the habitually sober, must be regulated less by any general *a priori* consideration of the previous habits, and their possible tendencies, than by the actual circumstances of the individual case in question, as they present themselves at the time, and may be judged by a sound discretion.

To determine these emergencies, and to administer aid in them, is the province of the instructed practitioner; and, if he be candid and really skilful, he will readily acknowledge that there are few questions which suggest

<sup>1</sup> *Chirurgical Treatises* (Ed. 1676), p. 47.

themselves in his practice, of greater nicety than those which relate to the determination of that precise period, in certain forms of disorder, at which a debilitating, or simply expectant plan of treatment can be laid aside, and a stimulating one safely adopted. There may be special occasions of sudden and dangerous exhaustion, in which the hazard can only be obviated by a use of spirituous liquors, stinted by no limit but the production of the desired effect, and where no other means could be employed with equal promptitude, and equal success ; but here, too, the conscientious practitioner will not only determine the manner in which the remedy is to be administered, but he will himself superintend its administration with the utmost assiduity, till the issue be ascertained. Indeed, there are no circumstances whatever, under which wine or spirituous drinks should be prescribed to the invalid, unless with the most jealous care and discrimination ; and it is consistent with my own observation, as with that of many others, that individuals, to whom they have been recommended during a prolonged course of tonic, or merely palliative, treatment, have unhappily glided through their use into a habit infinitely worse, and more perilous, than the disease or debility which they were designed to remove.

Even old age requires stimulants less than is usually believed : for age, with less waste, has less demands. As to that sinking of the vital powers which necessarily attends the actual approach of dissolution, it is obvious that, as it cannot be effectually resisted, it should only be forbearingly encountered. "Let me go home sober!" was the exclamation of an aged lady, when urged on her

death-bed to sustain her failing strength with brandy.<sup>1</sup> But these are generally questions which, we repeat, cannot be safely left to the decision of the inexpert; and, in whatever way they may be determined by those who are competent, they must still leave the essential principle unshaken, that no circumstances of ordinary life can render even the moderate use of ardent spirits, or other intoxicating fluids, either beneficial or necessary, or even innocuous. Indeed, the very fact that alcohol is occasionally serviceable as a remedy, and the manner in which it is serviceable, ought to lead to the inference that it cannot safely be employed habitually in health: for no powerful agent can be indifferently resorted to, under opposite circumstances, without risk of injury, and still less with the hope of equal benefit. But, having abundance of positive proofs, adapted to our object, and pressing upon us, there can be little necessity for dealing here with those which are merely negative, and which must be always of inferior value. However copious and striking may be the requisite evidence, it is needless to shew that alcoholic drinks can be safely dispensed with, where it is easy to prove that they are actually injurious.

A chief peril, however, in the moderate use of intoxicating drinks, in whatever way induced, or upon whatever plea adopted, lies in its being, but too frequently, merely a state of transition towards the formation of propensities of a more marked and fatal character. The delusive gratification, which we have described as following the first draughts, incites to their repetition;

<sup>1</sup> Dr Theophil. Thomson, in *Lancet*, 20th Dec. 1851.

and as the enjoyment, by a natural law, recedes farther and farther from the reach of the future victim, he is induced to pursue it with stronger efforts, and with greater ardour, as if unwilling to abandon the hope that it might still be renewed in its original purity. He cannot long appeal to his reason, for the course which he follows soon annihilates reason : or, should his better judgment occasionally interpose, it can lay no hold upon that weak facility which grows upon his disposition, and renders him an easy, though still, to a certain extent, an unwilling prey to his temptations. Not that he is, as yet, fully conscious of his danger : for the usages of society, the cheers of his companions, the pretences of a so-called good fellowship, which deals rarely in truly good offices, but fulfils all its obligations with smiles and blandishments, and that evasion of higher, and essentially more cheerful, occupations which passes under the name of conviviality, all combine to surround him with their allurements, and shed a false glare over the real darkness that extends before him. With a confident and buoyant spirit, therefore, he takes the next step in his progress.

How many a gallant youth, who could recognize this as the true picture of the morning of his life, before his manhood has reached its noon, has fallen a victim and a wreck !

## CHAPTER III.

### CASUAL INTOXICATION.

THE moderate use of intoxicating drinks having passed into a confirmed habit, and familiarity with their effects having palled the first feelings of enjoyment which we have admitted them to have excited, less reserve will probably now be employed, both with reference to the quantities and the times in which they may be taken. Consumed, henceforth, occasionally to excess, a new order of phenomena begins to be produced; such as are still more discreditable to man as a being endowed with reason, and still more pernicious in their influence upon his organization and health.

During occasions of festivity, the mental exhilaration, to which we have formerly alluded, must leave sometimes to the drinker too slight a command over his calmer reason, to enable him to pause after he has plunged himself into the whirl of excitement; so that, heaping continuously stimulant upon stimulant, he urges on the disturbance of his ideas, till it rises to the extent of real delirium. With his progressive intoxication, an extreme loquacity hurries the individual along into every form of indiscretion, tears the veil off his character, and betrays him either into intemperate attacks upon others, or into imprudent avowals with reference to his own

thoughts and actions. His imagination revels in unassociated and distorted images; his memory fails; his ideas elude him; and, while still speaking, he forgets the subject of his discourse, and maulders without judgment and without coherence. His virtues decline into defects: his courage becomes bravado, his liberality profusion, his friendship fawning. Meanwhile, his physical agitation is in proportion with the disorder of his intellect. The face is flushed, the eyes flash, the brain throbs, and the action of the heart is inordinately excited. Extravagant gestures, reckless and inconsiderate actions, shouts, snatches of song, and other tokens of frantic gaiety, are alternated with complaints, expressions of resentment, imprecations, and brawling anger; alike without definite aim or reason. He misapprehends what he hears and sees, and yields instantly to his misapprehensions. His own voice, as well as that of others, sounds strangely in his ears: if he sings, the notes are false; if he speaks, it is with shrillness and clamour.

As the intoxication advances, he is still restless in his movements, but they are wavering and without energy; and, as he totters from side to side, he sees objects double, or everything seems to reel around him; or the level ground appears to rock beneath his feet, or rises before him to meet his steps. Sometimes a kind of reverie occupies the transition stage between that of excitement and complete intoxication, and the individual remains for a while in a state of simpering quiescence. With another, one solitary idea, generally some real or fancied subject of offence, seems to lay hold of all that is left of the intelligence, and he mutters his resentment with stolid perse-

verance. In some, the drunkenness sets in suddenly, after the drinking has been continued for a time previously, without any marked indication of its effects; while, in a few examples, the power of locomotion seems to be implicated to a greater extent than that of the intelligence, and the drunkard loses the faculty of rendering his movements co-ordinate, and reels and staggers in his gait, though he still retains an entire consciousness of his condition. Or there may be the contrary of this, which is of not unfrequent occurrence, where the staring, vacant eye, and the expressionless features, with the inarticulate speech, surprise one in an individual who can still walk with almost perfect steadiness, though with a peculiar air of indecision in his movements. In such instances, which, in common with most observers, I have repeatedly had occasion to remark, there are physiological grounds for believing, that, in the first description, it is the cerebellum, or smaller division of the brain, which is chiefly affected; and in the latter, the cerebrum, or larger division.

As a close, the speech falters; the indistinct words, the drivelling expression of ideas equally indistinct, linger half-muttered on the lips; the features droop, and assume an expression of stolidity; the limbs cross each other, and at last sink powerless; and a benumbing torpor creeps over the senses, as, one by one, the nobler attributes of man's nature fall before the strength of the poison, and the power to consider and to judge lies as miserably extinguished as that to will and to act. The drunken stupor, thus degrading through its complete annihilation of man's dignity and pre-eminence, subsists for

an indefinite number of hours ; the smell of the spirits exhales from every pore ; the imbibed liquids are ejected from the system by the different emunctories ; and the paroxysm of intoxication is completed.

In the development of the successive phenomena of intoxication, we thus discern, at first, an acceleration of the circulation, which acts, along with the more direct effects of the alcohol, by heightening for a time the vitality of the organs of motion and of sense, and so hastens the rush of images through the brain, and throws it into a state of excitement. As the course of the images is more rapid, so, in the earlier stages, they are also marked by greater vividness : but, as the excitement either subsides into relaxation, or advances into that state which produces congestion of the blood-vessels within the brain, we observe that it is succeeded, on the one hand, by a proportionate degree of physical depression, or, on the other, by that pressure on the nervous centre which leads to stupefaction ; whilst mentally, the primary vivacity of perception passes into a wide, incongruous, and dreamy agglomeration of ideas, which the mind is unable to command, and which finally vanish from before it to leave it in a condition of unconsciousness.<sup>1</sup>

The outline of the phenomena which we have thus given must be held to admit of a number of farther variations, arising either from peculiarities of constitution in the individual affected, or from the way in which the intoxicating fluid has been administered. With some men, for example, there is, at no stage of the progress, any-

<sup>1</sup> Feuchtersleben's *Principles of Medical Psychology* (Sydenham Society Ed.), p. 167.

thing like that tumult of excitement and gaiety which is observed in others. Drunkenness with them is a state of stupid indifference; or it may be one of intense melancholy, oppressed with gloomy terrors, and leading to tears, and similar expressions of inconsiderate grief. In a few it assumes the aspect of a kind of maudlin piety; and I shall not easily forget the painful impression received from an instance of this description, where an elderly female, simpering vacantly in a state of drunkenness, was found with the open Bible before her, expounding its contents to a youthful relative at her side. With others, the excitement approaches to that of actual madness, loosening every restraint, and prompting to language and actions of extreme and dangerous violence. In a fourth class, the vital powers appear strikingly depressed, and the pale countenance, chilly surface, and suppressed pulse denote the feebleness of the circulation. Sometimes the degree of stupefaction is so intense as to render the body insensible to the most painful injuries. An instance occurs to my recollection of a drunken sawyer, who fell forward from his chair, while seated at the fire, so that his knee was brought in contact with the embers; and it was only when he was relieved from his situation by the aid of others, that it was discovered that a broad and deep eschar had nearly penetrated into the joint.

This drunken stupor has been even designedly induced, and by those who had little idea of anticipating, in another shape, the important modern discovery of the application of ether, or its more convenient modification of chloroform, to the production of insensibility during surgical operations. An amusing instance of this description

is given by Richerand,<sup>1</sup> on the authority of Percy, the distinguished French surgeon, who was a witness of the circumstance. A man, residing in the vicinity of Lunéville, had dislocated his arm, and the surgeons of the place had endeavoured in vain to effect its reduction. Recourse was had to a bone-setter, who, after his ordinary initial process of joining with his patient in a mass to the Virgin, ordered the man to swallow a large porringer full of hot wine every quarter of an hour. In the course of a couple of hours he became dead drunk; when the muscles ceasing to have any power of resistance, and the patient to feel, a slight traction was sufficient to replace the bone in its socket. The same method, however, was naturally found less successful shortly afterwards, in similar hands, in a case complicated with an injury to the chest, where the liberal draughts of wine only served to assist in kindling up an inflammation of the lungs, which proved fatal on the fourth day. Thus even a lucky cure, in the hands of ignorance blindly wielding powerful agencies, becomes converted into an element of future mischief.

Where spirits have been administered at once in large quantity, and in a somewhat concentrated condition, the results may prove speedily fatal; the apoplectic stupor supervening in a few minutes, or even instantly. If a mixture of different drinks be received into the stomach, that organ usually suffers in a direct manner, so as to influence the kind and degree of the subsequent intoxication, which is ordinarily more rapidly induced, as well

<sup>1</sup> *Des erreurs populaires relatives à la Médecine* (3d edit.), p. 142.

as attended with peculiar marks of oppression. The intoxication from fermented liquors, though less easily effected, is generally more enduring, if not more complete, than that from spirits. It will be obvious, that in the progress of a career of drinking, the degree of intoxication must frequently be limited to some stage less advanced than that of extreme stupefaction; but if the habit be not wholly checked and abandoned, there will soon be occasions in which not a feature of our more general description will be found wanting.

When the symptoms have subsided, and the individual is again restored to consciousness, it is seldom that he does not at once begin to incur the penalty of the recent excess. The giddy and aching head, the dry and furred tongue, the burning skin, the bitterness in the palate, the feeling of weight and sickness of stomach, the fetid regurgitations, or actual vomiting of nauseous matters, and the muscular feebleness and incapacity, are all evidences of the extent to which nature has been outraged, and how deeply she resents the injury. It is true, that these signs of disorder are usually soon dissipated; and it is too often attempted to dissipate them, through that recommendation, which is at least as old as the rules of the school of Salerno, in the twelfth century, and which advises a morning cup to remove the consequences of the evening debauch;<sup>1</sup> yet this cannot be wholly effected, and least of all in this fashion, without some trace lingering within the system, which after circumstances may render apparent. Still more unquestion-

<sup>1</sup> *Regimen Salernitanum*: R. xv. "De nimia potatione vini."

ably, shocks so intense cannot be inflicted with frequent recurrence, without an eventual production, sooner or later, of disastrous consequences.

It was at one time a popular notion, which was perhaps only encouraged by some as a pretext for a prevailing indulgence, that to get drunk once or even twice a month was a practice beneficial to health. This maxim has been, at different periods, attributed to one celebrated physician after another, and among the rest it was usual for vulgar credence to assign it to the late Dr Gregory of Edinburgh. But the truth is, that it belongs to a much more remote antiquity, and has even been imputed to Hippocrates, whose writings, it may be well believed, afford no trace of so absurd a dogma. So far back as the year 1665, it appears to have been still considered of sufficient importance to be made the subject of controversy, in two distinct and able theses, sustained at Paris, by MM. Hammet and Langlois. The eminent Scottish physician and teacher was accustomed to deliver very opposite doctrines in his public lectures. "I never," he used to exclaim, "got a patient by water-drinking, but thousands by strong liquors."<sup>1</sup> And, in his celebrated *Conspectus*, he speaks of distilled spirits, as "deservedly held to be the most pernicious of all that human luxury has hitherto invented."<sup>2</sup> But so early as the beginning of the sixteenth century, physicians of eminence are already found inveighing against the baneful practice of intemperate drinking;<sup>3</sup> and so frequent have been their humane

<sup>1</sup> *Dr Blackmore's Notes of Dr Gregory's Lectures: Medical Gazette*, vol. xii. p. 376.

<sup>2</sup> *Conspectus Medicinal Theoretico*, cap. xxv.

<sup>3</sup> *Jos. Frank, Praecepta medicorum universae Praecepta*: P. II., vol. I, a. I., c. xxiv., sec. xviii.

admonitions, then and since, that to cite them all would be to run through the whole range of medical literature and its accessory sciences, and would include its most illustrious names, and among others not already quoted, those of a Sydenham, a Linnæus, a Haller, and a Berzelius. If credit be due to those reasons which we have advanced for the belief, that even a moderate use of intoxicating liquors cannot be long continued without pernicious consequences, slowly and insidiously produced, and frequently seen only in their final results, how much more shall we be constrained to admit, that evil must necessarily follow the repetitions of that more excessive debauch, which prostrates the faculties, and which, after the violence of its first action has subsided, betrays the existence of something beyond, in the sickening depression under which the system continues to labour? Where nature delivers such obvious tokens, there must be more than ordinary blindness if they cannot be read as an exposition of tendencies which are preparing the way for permanent suffering; unless, indeed, this should be prevented, as it well may, by effects more immediately fatal.

Where a debauch is perpetrated by an individual who has already tendencies, hidden or obvious, to disease of any of the more important organs, as of the heart or the brain, the excitement of advancing intoxication is attended with especial danger. There are many in whom such tendencies are actually present, without the slightest possibility of their being themselves cognizant of their existence. Nay, not a few cases have occurred to my observation, and must have occurred to that of every expe-

rienced practitioner, in which disease of the heart had already advanced to even an alarming extent, without the patient, however naturally intelligent, having the faintest suspicion of the nature of those uneasy feelings which distinctly marked his disorder to others, and without his even being able to refer them to the particular organ affected. Yet if, in the unwariness of this ignorance, he had incurred the risk of a fit of intoxication, there could have been no result more justly anticipated than a quickly fatal termination. Deaths, thus caused by a merely casual intemperance, occur with sufficient frequency to arrest the attention ; or, if they escape the notice of the ordinary observer, or leave no trace upon his memory, it is not because they are unfrequent, but because the world usually occupies itself more with its struggles for the means of subsistence, than with the very essence and true honour of existence itself ; and the warning passes unheeded in the midst of the busy turmoil, which, with more leisure, and better instruction, might have served and been diffused as a salutary lesson.

With the more obviously injurious results, however, of such fits of intemperance, the world is already familiar. When the moral restraint is weakened, and the judgment unseated, the passions rush into license ; and, but too frequently, in the midst of the vilest of associates, the most degrading of diseases is contracted.<sup>1</sup> In the recklessness of the excitement, no circumstances of peril are regarded, and injuries are inflicted or received of every description, as of every degree of severity, up to the

<sup>1</sup> — " *Quid enim Venus ebria curat?*" Juvenal, *Satyrax*

extinction of life. The helplessness of the drunken stupor has also its own peculiar dangers. The face chances to be turned downwards, and presses upon the pillow, and suffocation ensues ; or, with a viler misery, the victim rolls in the kennel, and the mouth and nostrils sink into the mud, and he is soon stifled ; or the river, or the pool, lies beside his path, and he staggers over the brink, too powerless to save himself ; or some danger is at hand, which he cannot appreciate, or struggle to avoid, and he is crushed and mangled ; or he is abroad at night, in the excessive cold of winter, and falls helpless, and the early labourer finds him a stiffened corpse. Instances of death, as well as minor instances of extreme danger, from every one of these, and from other like causes, have occurred within my own observation, and there are few who have not had opportunities of recording similar examples.

At the early stage of the drinker's progress, while the acts of intoxication are still merely casual, and occur only at considerable intervals, perilous as they frequently are, and heavily as retribution may threaten, there yet remains hope and space for retrocession ; and the natural elasticity of health, if no longer wearied and weighed down by the vicious indulgence, may still be revived with all its original freshness. But this hope becomes ever fainter and fainter, as the time for the happy change is deferred, and the acts of intoxication become closer and closer. Conscience, assuredly, has still its reproaches, and penitence not unfrequently its tears ; but the will has lost all tenacity of purpose, and the victim struggles and yields, advances yet averts his looks, as if unceasingly aware that honour and safety lay behind, and shame and destruction before

him in his path. His resolutions partake of the universal weakness which is progressively benumbing his intellect and his frame. Growing lost to self-esteem, and to the estimation of the world, having no resting-place for his affections, and no object for his ambition, for he has poisoned the one and shattered the other, his course is now merely a drifting onwards at the mercy of the habit which has enslaved him, and his best enjoyment is forgetfulness.

Even the excitement of sociality is no longer necessary to give a plea to his excesses. On the contrary, the lowering of his own self-respect has had the usual result of rendering him mistrustful of his fellow-men ; and, discontented with himself, and with all around him, he skulks into seclusion, that he may minister to his craving in secret. Thus the gay and social folly has lapsed into the moody and solitary vice ; the drunkard has shrunk within himself, that he may prey undisturbed on his own existence ; and sallow and dejected, with the brand of depravity on his brow, he reels into the third and latest stage of his career.

## CHAPTER IV.

### HABITUAL INTOXICATION—CAUSES.

In tracing the early career of the drinker, we have alluded to a variety of incitements which tend to foster the growing propensity, and confirm it into a habit. But it must be farther admitted, that there are many peculiarities of constitution or of circumstances, in close relation to the individual man, which occasionally give special force to these incitements, and which thus become the means of establishing a proneness to intemperance in certain individuals, while others, in all but these peculiarities equally exposed to the contagion, are happy enough to escape its influence. An inquiry into these peculiarities is necessary for the proper comprehension of the remaining portions of my subject.

In as far as my own observation has extended, it has induced me to consider, that what is termed the sanguineous temperament, or that constitution of body which in fact predominates with the Teutonic races, and is characterized by a somewhat rounded outline, light-coloured or reddish hair, a delicate and florid complexion, and a lively and excitable disposition, is that which exhibits, of all others, the greatest tendency towards the acquisition of habits of intemperance; and this natural

proneness unfortunately derives additional force from the too frequently unintellectual bent of their minds, and an inclination towards grovelling and merely animal propensities. Of this, many illustrations crowd upon my memory, or are recorded in my notes; and a similar opinion finds a place in the writings of others who have entered with prominent success into like inquiries.<sup>1</sup> Those of a bilious temperament, presenting greater meagreness of form, with dark hair and complexion, often with sedentary habits, and of grave or even melancholy disposition, have appeared to me to rank next in their proneness to the use of intoxicating liquors. It is generally through a feeling of previous depression, that individuals of this temperament are induced to have recourse to the stimulus of ardent spirits; and the depth of genius and vigour of imagination, which is not rarely their marked prerogative, leads a portion of them to seek solace in the realms of fancy which expand before the influence of the cup, rather than stoop to the level of the more tame enjoyments of ordinary society. Fortunately, however, the penalty of the morning's sickness, after the evening's excess, follows, in these constitutions, with such unfailing promptness and severity, that the habit can only be formed with greater slowness, and after a more protracted struggle; while the nobler powers of the will and the intellect can usually be brought to act with more signal effect in staying the progress. It is thus a libel on genius, to allege that its possessors, as a class, are often addicted to drinking: yet this accusation has been brought

<sup>1</sup> Huss, *Alcoholismus Chronicus, eller chronisk Alkohol-tyrdom: Andra Afteftningen*, p. 171. Stockholm, 1851.

against them by one<sup>1</sup> who was himself a man of considerable genius, and who recognized their temptations without appreciating their means of resistance. As to the more abstruse topics for study and reflection, their successful pursuit is wholly incompatible with even the most limited abuse of intoxicating fluids. The nervous temperament, with its weak and fragile habit, and the phlegmatic, with its dulness and inactivity, are usually the least affected; though, if the former be joined with the sanguineous, the mixed constitution evinces the propensity with corresponding readiness. Of course, it is necessary to distinguish here that acquired sensibility of the nervous system, which may arise as an effect of intemperance, from the original sensibility which we are considering as its possible cause.

The age of the individual may be expected to exhibit a marked influence. Twice, in the course of my experience, have instances occurred to me, in which individuals have perished, exhausted by all the ordinary effects of intemperance, before they had entered upon the period of manhood; but such melancholy examples are fortunately of rare occurrence, and a humane scepticism would willingly have doubted their possibility. Usually, the period between the thirtieth and fiftieth years is that which is most unfavourably distinguished by the prevalence of habits of intemperance; though not a few also, at an age but little above maturity, have already passed through every stage of the career, to its fatal termination. But there is no period, in which hard-drinking is more especially inju-

<sup>1</sup> Macnish, *Anatomy of Drunkenness*, p. 20.

rious, than during that of early youth, when the rapidity is generally not less remarkable than the prematurity of the decay. After sixty, few drunkards commence their career; and few of those who have commenced earlier still linger on the scene. Now and then, we may observe persons of far advanced years, tottering into the grave under the joint burden of intemperance and decrepitude; but the shock with which this is remarked proves how generally the contrary is accepted as the rule, and that a premature fate more usually prevents this unseemly junction of grey hairs and dishonour. Thus it is at that period of life, when man is in the fullest possession of his energies, and fitted to render the most valuable services to society, that a debasing vice snatches him from his duties, converts him into an example of evil, and reduces into impotence, or worse than impotence, the whole tenor of his existence.

It is scarcely to be doubted that the male sex evinces a stronger disposition to the abuse of intoxicating drinks than the female, subjecting this to the obvious test of the more extensive prevalence of intemperance among the former than among the latter. Thus, in the curious and valuable investigations by Lippich, we find, as the average of two centenaries of drunkards, in Laibach, that 72.5 percent. were men, and 27.5 were women;<sup>1</sup> while, in this country, Mr Neison has since estimated the proportion<sup>2</sup> at about 79 of the former and 21 of the latter. But in a table of the number of drunken individuals, apprehended by the police in London, in 1832, which is made the subject of some in-

<sup>1</sup> *Grundrige sur Dipsobiosatik*, pp. 3, 72.

<sup>2</sup> *Journal of Statistical Society*, vol. xiv. p. 219.

teresting comments by M. Quetelet,<sup>1</sup> we find that the proportion was as high as 10,290 women to 15,333 men. From the Report of the Inspector-General of Prisons in Ireland, for 1853, we learn that of 11,864 drunkards, committed during the year, 6,514 were men, and 5,350 women. There is unquestionably a slower conversion of materials, and less attrition and waste, in the female than in the male: consequently there is less feeling of the want of a frequent renewal of nutritious substances for sustenance, or of stimulating fluids which simulate sustenance. Still it may, perhaps, be fairly questioned, whether the greater temperance of the female do not depend upon her peculiar position in society, and her exemption from most of the temptations, and many of the opportunities, which are snares in the path of her helpmate, rather than upon any special immunities belonging to the feminine character and constitution. With those incitements which take their origin in an ill-regulated spirit of conviviality, the female drunkard has no concern. From its very commencement, her vice is devoid of gaiety; and appears under that exclusive and solitary aspect, wrapped in a maze of deceptions, which brands it with peculiar ignominy. And when, at last, the secret of her excesses may be revealed only by their results, and the loathsome features of intoxication stand in open and repulsive contrast with the grace and delicacy natural to her organization, speaking to us plainly, in most instances, not only of duty outraged, but of affection blighted and confidence abused; and, greatest and most

<sup>1</sup> *Sur l'homme et le développement de ses facultés*, t. II. p. 187

pitable change of all, if a mother, of motherly love deadened or perverted ; it is no wonder if society has attached to her debasement the stamp of the deeper degradation, and if there should appear reason, under this aspect, to consider that the propensity in her must assuredly have been the stronger, since it has yielded to the slightest temptation to produce the vilest defect. Female intemperance, however, is unfortunately a widely prevalent vice; and, when once established, is usually distinguished, as might have been expected from the history of its origin, by its intensity and its stubbornness. As a striking example of this, Dr Powell<sup>1</sup> mentions the instance of a female in a respectable situation in life, who had been placed eight several times in a mad-house, in the course of five years, to restrain her from this acquired habit; yet so strong were her determinations, that he has seen her in a state of drunkenness within twenty-four hours after liberation. A similar instance is recorded by Esquirol.

As the possession of qualities of a lighter description, such as humour or vivacity, which please in society, and find in it their fittest arena, or even the mere capacity of appreciating these in others, is often dangerous as predisposing to conviviality, and thence to excess, so there is an opposite danger in those feelings of nervous distress, of physical or mental suffering, and of remorse, which find a temporary solace in the administration of stimulants, and thus increase their evils by a blind attempt to evade them. It is for the moralist to point out the folly, or the crime, of adopting one misfortune, or one fault, as

<sup>1</sup> *Medical Transactions of London College of Physicians*, vol. iv., p. 148.

the plea for rushing into others; but the physician may dwell with propriety upon the analogous folly of rendering one description of bodily suffering the pretext, or the instrument, for drawing down upon the system evils of infinitely greater magnitude. One or two remarkable instances, however, have occurred to my observation, in which individuals of excellent principles, but unfortunately of hypochondriacal tendencies, in their impatience to remove some merely transient and occasional sense of uneasiness, have had recourse to intoxicating fluids; with the natural result that, although a very moderate quantity sufficed at first to cheat them for the instant with a spurious relief, their uneasiness recurred only the more frequently, and demanded ever stronger and stronger applications of the remedy, till the habit grew confirmed, and the unhappy patients, really in spite of their desires and their convictions, sunk irretrievably, and perished drunkards.

The occupation of the individual has also its marked influence in promoting the tendency to habits of intoxication. One singular retribution may be profitably remarked, that the tavern-keeper, and petty retailer of intoxicating drinks, becomes, in a very large proportion of instances, the victim of his own traffic, and of the temptations with which he surrounds himself while engaged in presenting them to others. Those occupied in sedentary employments, which weary from their uniformity, as the weaver and the shoemaker, glide readily into the vice; while other labourers and artisans, as miners, coal-heavers, curriers, workers in metals, &c., whose occupations require greater exertion, and give

facilities for excess through the liberality of their gains, evince a still more conspicuous proneness towards what treacherously deludes them with an appearance of support, under the oppression of those toils, the strong efforts of which cause a rapid waste, and create the appetency for powerful restoratives. Perhaps the propensity establishes itself nowhere more readily, than in those employments which fail to impose a regular and continuous duty, along with a like failure of uniformity in their compensation: as with the fisherman, who has his seasons of hard toil and rich gain, with intervals of comparative indolence or poverty; and the sailor, who bursts from restraint into the possession of accumulated wages; or the musician, and others, who frequently gather their uncertain gains amid those scenes of dissipation, which suggest the ready means and opportunity for debauch. No rank or station, however, protects its owner from the infection, because one or other of the conditions for its development may be present anywhere. No wealth is high enough to confer immunity; and I have not yet seen poverty so abject as to preclude indulgence; nay, subsistence by begging seems rather to incite powerfully to the vice, wherever the alms are liberal. But if certain occupations appear to operate as causes of drunkenness, the monotony of existence arising from a want of all occupation is unquestionably still more powerful; and the idle are ever the most apt to enter into alliance with the dissolute. Perhaps a life of rural labour is that which, upon the whole, is the most fitted to resist the degradation; the opportunities for excess being here unusually limited, and example less common and seductive.

In strict connexion with the employment of the individual, must be considered the nature of his regimen, as well mental as bodily. If he have cultivated within himself few resources for intellectual amusement or reflection, his hours of leisure, instead of affording him refreshment, become more irksome than his periods of toil; and he seeks in extrinsic excitements, that occupation for which the mind incessantly yearns. If his diet have been insufficient in quantity, or defective in its measure of nutrient matters, it leaves a feeling of sinking within the system, which prompts to the use of stimulants as the readiest means for its removal. In like manner, if he approach his meals with little keenness of relish, he may endeavour to rouse the sensation of hunger by the provocative of a dram; yet it would be more prudent if he kept in view, that it is by the natural appetite that the natural demand for food is evinced, and that the false hunger induced is no indication of the actual wants of the system, or of the power of digestion. If, on the other hand, the palate have been pampered by delicacies, or by indulgence, till the stomach labours with oppression, the stimulus of wine or of ardent spirits appears to excite the movements of the loaded organ; but it is solely as the lash excites the horse to new efforts, without increasing its actual vigour. For, neither is there here any real benefit. On the contrary, the investigations of physiologists prove, that the effect of ardent spirits, received into the stomach along with the food, is to harden certain of the substances, and so to render them less divisible, while they otherwise tend to impede the digestive pro-

cess.<sup>1</sup> It must be evident, then, that thus to stimulate the stomach is to hinder nutrition instead of promoting it; and that the food, instead of being more easily assimilated, either will be caused to linger within the organ as a source of irritation, or be carried beyond it before the first process of digestion is completed.<sup>2</sup> And this inordinate excitement will be succeeded by that subsequent exhaustion which is everywhere its consequence, and which will leave the stomach unable to meet adequately the future requirements of the system: so that farther excitement appears a matter of necessity, and the indulgence adds a new risk, and a new motive, towards constituting the habit. Thus, although the specious remedy seems applicable to the most opposite conditions, and want seeks its support where repletion finds its solace, its effects, in either instance, are merely deceptive. But the path of error could only lead to error: and where the obvious and proper remedy was neglected, the spurious one must infallibly increase the evil.

Analogous in its effects to a deficient diet, is the influence of residence in overcrowded, dark, and damp dwellings, where the habitually vitiated state of the air pollutes one of the first sources of the vitality of the system. The blood, which has not undergone its proper changes in the lungs, by being brought into contact with a pure atmosphere, is unfitted for the due sustenance of the powers of life. Hence languor and depression creep

<sup>1</sup> Van der Kolk, *Over den invloed van Sterken Drank op het Lichaam*, p. 11. Utrecht, 1851.

<sup>2</sup> Böcker, *Beiträge zur Heilkunde, insbesondere zur Krankheits-Genussmittel, & Arzneiwirkungs-Lehre*, B. I. p. 248.

*See also Ch. 11.*

over all the functions ; the pulse flags, and the strength falters. This is precisely one of the leading conditions which crave the excitement of intoxicating fluids ; and as the drunkard sinks deeper and deeper in his misery, becoming ever more and more involved in the discomforts and filth of a habitation upon which his vice has usually fixed the indelible stamp of poverty, the influences of his wretched home, and of his destructive habits, perpetually re-act upon each other, and he droops in a conflict from which he has rarely the prudence or the vigour to struggle to escape. But if the atmosphere of his room, impoverished of its oxygen, leaves his blood loaded with impurity, our after researches will shew that the drinking of spirits also surcharges the blood in a similar manner ; and it is, therefore, through a vain endeavour, that the drinker turns for relief to that which can ultimately only subject him doubly to the deleterious influence. The locality or district, in which his residence is situated, may also have its particular influence upon his habits. The inhabitant of a large town is the more surrounded with temptations : of a small one, more subjected to the irksomeness of half-used energies. A cold or a moist climate, as we have already hinted, is also undoubtedly, although by no means absolutely or exclusively, favourable to the development of the propensity ; intoxicating fluids being readily resorted to with the hope of dispelling its ungenial influences. Yet, if we distinguish properly between heat itself, and the sensation of heat, we shall find that, in this respect also, no real advantage can accrue from their employment ; while we have given grounds for shewing, that the importance

of the agency of climatic causes, considered apart from others, has been greatly over-rated. On the other hand, however destructive habits of intemperance may be in a cold climate, the drunkard in a warm climate becomes undoubtedly subjected to still greater and more rapid detriment.

A question of much interest suggests itself, whether a proneness to habits of intoxication is capable of being communicated by a special hereditary descent, proceeding from parent to child, independent of those more general tendencies which may be judged inherent in races or nations, to which we have referred in a previous chapter. There are, doubtless, many instances in which the drunken father has been succeeded by the drunken son; who has grown up under that neglect of all that was good, and unceasing example of all that was evil, which were the sure concomitants of the parent's defect. The repulsiveness of drunken habits unfortunately soon ceases to excite disgust, in many of those who are compelled to be their familiar witnesses. The home of a drunken husband is too frequently rendered more intensely miserable by the presence of a drunken wife; who sinks gradually amid the wretchedness in which she has been involved, and at length shares in the vice and the degradation which she may have been at first unable, and at last unwilling, to check. But beyond this, if a particular temperament be admitted to be attended with a special proneness to excess, how shall we deny that such temperaments are frequently hereditary, and that thus the taint descends as an innate quality of the natural constitution? Where the form and expression of the countenance can be trans-

mitted with minute resemblance, the more obvious traits of the character, in as far as these depend upon organization, may, and frequently do, pursue a like descent. Assuredly, many instances also occur, in which the disgrace of an intemperate father is retrieved to the family by the conduct of a virtuous son: but it has usually appeared to me, that the mother has stepped in here as the guardian angel; and, maintaining herself free from the father's taint, has conferred upon her child that training which has arrested the tendencies which might otherwise have overwhelmed him. It is, at all events, certain, that it is no uncommon circumstance to witness whole families, who have presented the almost universal contamination of a tendency to excess. Of this, I recollect not a few flagrant examples, some of which it may be necessary for me to notice incidentally in the sequence of these remarks: and, if special circumstances may have caused numerous exceptions to the rule, if the drunken father may have had frequently a temperate son, or the drunken son a temperate father, these cannot be held to invalidate it wholly, while counteracting causes may be considered to have been brought into operation; or unless it can be shewn that, in other respects also, temperament is without influence, or is incapable of being transmitted by inheritance.

Though not one of these conditions or circumstances, which we have thus described as favourable to the development of intemperance, can by any possibility be held to justify its existence, yet it would be unphilosophical, or rather simply irrational, to dispute their influence. A wide-spread pestilence, of which all reflecting men admit

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the noisomeness and the danger, yet which still increases, or at the best, can scarcely be considered to diminish perceptibly, must have its real and efficient causes rooted somewhere in the frame-work of society. Men do not rush upon destruction without some pretext of gratification, or temptation of advantage; and it must be through some strange and powerful movements in their organization, that they are induced to seek that gratification, if we may not here speak of advantage, where the largest experience tells them that the destruction is so sure to follow. As it is usually only in the first stages that the habit of intemperance admits of being successfully encountered, it becomes a matter of the utmost necessity that its predisposing as well as its exciting causes, or in other words, the conditions for its origin and its diffusion, should be carefully investigated, and that all earnest minds should join in an effort to weaken the one, or to extirpate the other.

It will not suffice, as it has never hitherto sufficed, to point merely to the results. Before the dread of these can be fully impressed upon the judgment of the drinker, he is already drawn into the current. It is by a power from behind that he is then impelled onwards, and, unless that power can be broken before it attains its full strength, his career will be unchecked. A review of the favouring conditions which we have hitherto detailed, together with that farther and more mature consideration of the subject, of which it is undoubtedly susceptible, but which our limits refuse to admit to the extent desirable, will shew in how far it is possible to remove these conditions, or to neutralize their influence.

## CHAPTER V.

### HABITUAL INTOXICATION—PROGRESS.

WHERE all or any of the favouring conditions for intemperance exist in an individual, and where no attempt has been made through training, or through moral and religious principle, or through caution in resisting temptation, to obviate their effects, the transition from conviviality to casual intoxication, and from casual intoxication to habitual intemperance, is an easy and natural course. This point once attained, the quantity of spirits consumed by the drunkard is frequently so great as almost to exceed belief; although in animadverting upon this, we must not forget that the culpability of the excess lies rather in the grossness of the effect produced, than in the measure of alcohol required for its production.

One individual, who came under my observation, was for years in the habit of consuming nearly a bottle of whisky daily, even when engaged in his ordinary employment. Another has taken twenty-two glasses of the same spirit undiluted, in a debauch of a few hours. A third, who died of the drunkard's delirium, at the age of forty, and whose well marked sanguineous temperament might have been received as an evidence of the more

decided tendencies of that form of constitution, was frequently in the habit of consuming from two to three bottles daily. Another, sinking under liver-complaint, took, through the connivance of his attendants, a bottle of gin every day during the last week of his illness. With a fifth individual, who managed with such methodical excess as to be alternately drunk and sober twice in every day of a protracted existence, I estimate that the quantity of whisky consumed must have fully equalled sixty hogsheads in all: while a sixth, extended on his deathbed, had whisky secretly brought to him in soda-water bottles, and was in the habit of gulping it down, after the fashion of drinking that innocent beverage, till he was detected in the act.

The experience of others is equally, or even still more remarkable. Dr Hutchinson mentions, that several of the patients in the Glasgow Lunatic Asylum confessed that they had taken a bottle or more of whisky daily, for weeks at a time.<sup>1</sup> Dr Most gives the case of a man in his seventieth year, who, for twenty years preceding his death, had drank daily upwards of a quart of rum, or nearly forty hogsheads in all.<sup>2</sup> Böttcher mentions an inmate of the workhouse of Hanover, who had been in the habit of taking from half a gallon to nearly a gallon of spirits almost every day.<sup>3</sup> Professor Chomel cites the instance of a patient, thirty-four years of age, who had consulted M. Cullerier, and who had been in the daily custom of gorging himself with the enormous quantity of fifteen

<sup>1</sup> *Annual Report of Glasgow Lunatic Asylum* for 1842, p. 25.

<sup>2</sup> *Encyk. der gesammte med. & chir. Praxis*, B. II. p. 763.

<sup>3</sup> *Geschichte der Mässigkeits-Gesellschaften*, Hannover, 1841, p. 314.

bottles of wine and four of brandy.<sup>1</sup> M. Esquirol, in his well-known work upon Insanity, narrates the case of an advocate, forty-one years old, who had been known to swallow 171 small glasses (*petits verres*) of brandy in a day.<sup>2</sup> Brühl-Cramer, one of the most esteemed authorities on the habits and diseases of drunkards, whose sphere of observation lay in Russia, saw a patient who, in a fit of drinking, demanded a glass of brandy every five minutes, although each produced the most intense sensation of burning in the stomach, requiring copious draughts of cold water; and so persisted, till nature sunk, and he died on the twenty-first day.<sup>3</sup>

Professor Huss<sup>4</sup> thus describes the ordinary life of what is considered even a moderate drinker, among the labouring classes of Stockholm. Rising at five or six in the morning, according to the season, he takes a cup of coffee mixed with a glass of brandy, containing from two to three ounces of the spirit, which is there usually prepared from potatoes. He then attends to his occupations till eight o'clock, when he takes breakfast and a second glass of brandy. At his dinner, at noon, he has another glass, or, more usually, a glass and a-half. At five or six, he has again a glass; and lastly, with his supper at eight or nine, still another. He thus consumes from five to five and a-half glasses regularly every day; enjoying, all the time, a character among his comrades as a person of great moderation, who scarcely takes what is requisite for an individual in his station. Even if he becomes in-

<sup>1</sup> *Eléments de Pathologie Générale*, p. 491.

<sup>2</sup> *Des Maladies Mentales*, t. II. p. 78.

<sup>3</sup> Rösch, *der Missbrauch geistiger Getränke*, p. 171.

<sup>4</sup> Op. Cit: *Andra Afteckningar*, p. 173.

toxicated on two days of every week, the Saturdays and Sundays, he does not acquire the reputation of a drunkard. This is only attained should the toper begin to take the spirits between his meals also, and without consuming with them any portion of food. Such a one will now swallow from twelve to fifteen, or even the surprising quantity of from sixteen to twenty, glasses, daily, and that without shewing signs of intoxication. But he is not long content with this proportion, his tendency being to proceed to greater quantities, and to the extreme of inebriety. Many Swedish drunkards confess to their having ordinarily taken about two bottles daily; and, in their occasionally recurring paroxysms of deeper excess, even this quantity is often widely surpassed. In another treatise, Professor Huss cites the example of the village of Norberg, where the miners, at an average, are in the habit of each consuming sixty cans, or about thirty-four imperial gallons, of brandy yearly.<sup>1</sup> It is somewhat of a relief, that the Professor adds to his sketch of the moderate drinker, that it does not apply to the habits of every workman, and that the number of exceptions is yearly increasing. As to the more advanced drunkard in Sweden, his description will apply with nearly perfect identity to what is ordinarily observed among ourselves.

We are thus to suppose that all caution and reflection has been set aside, that the drinker persists in his habits, and that we are now to contemplate him as fully committed to his baneful course. It is true, his early illusions are dissipated. A stern reality has swept away the false glitter of those

<sup>1</sup> *Om Sveriges Endemiska Sykdomar*, Stockholm, 1852, p. 22.

fascinations which seduced him, and has proved at once their instability and their worthlessness. But the habit has enslaved him, and he cannot now break the chains which he has forged with his own hands. If any, indeed, have been able to free themselves, and to retreat into safety, we part with them here willingly, and congratulate them on their restoration to the dignity and the privileges of rational manhood; but for him who remains the victim, we have a tale of farther degradations to unfold, the incidents of which grow ever darker and darker as it approaches its miserable termination. The spirit of earnest truth is all that will be required to give force to the narrative. Where the imagination of those uninitiated in such topics cannot fail to linger behind the reality, it is as needless, as it would be unwise, to have recourse to exaggeration.

It becomes, then, our duty to trace the drunkard farther in his course, and to point out the order of the successive changes to which his constitution remains to be subjected. At first, the deterioration of his health may appear so inconsiderable, that it can scarcely be detected by the unskilled observer. He may even, for some time, present the aspect of more than ordinary robustness, and his full and rounded form, and florid complexion, may lead to the confidence, that not only he has suffered no injury from his excesses, but that his energies have, on the contrary, actually increased in strength and stability. But the eye of experience can already detect something unreal in this semblance of vigour. The tint of his complexion presents occasionally a peculiar pallor, interlaced with small red streaks; or it verges slightly into that shade

of purple, which proves that the vitality of the blood, and the integrity of its circulation, are already beginning to be perceptibly impaired. The roundness of outline is no longer accompanied by that firmness and elasticity which are the characteristic tokens of a sound organization. The cheeks have a bloated and flabby look, the eyes are bloodshot, and, possibly, the tip of the nose exhibits auspicious crimson. A moderately quickened pace produces hurried breathing; and a sudden feeling of lassitude is induced by exertions, which previously would not have caused the slightest sensation of fatigue.

His digestion now begins to be permanently affected. His meals are taken with less regularity, as with diminished zest; and his palate craves the excitement of salted, highly spiced, or acidulated food. A feeling of nervous exhaustion, accompanied with perceptible tremor of the limbs, oppresses him miserably in the earlier portion of the day, during which period his appetite is usually utterly defective. Hence, with the first dawn, his longing for ardent spirits commences; and the breakfast of a Scotch drunkard, among the lower classes, not unfrequently consists solely of whisky, followed by a draught of brisk small beer, in which has been stirred a little oatmeal. Should the supply of spirits be inaccessible at the time, the anguish of the drinker becomes intolerable, and no gleam of pleasure breaks in upon the gloom of his mind, or sensation of ease alleviates the distress of his body, till he has purchased a transient forgetfulness, at the dearest of rates, by a repetition of his debauch. As the action of the spirit wears out, it is freshened at frequently recurring intervals during the day; and some-

times so as to keep up, in one, a thoroughly besotted condition, while another, incessantly tippling, and never for an instant otherwise than under the influence of spirits, may be only rarely seen in a state of flagrant drunkenness. Thus, alternating between excitement and depression, without that due supply of solid and nourishing food which is alone fitted to renew the waste of the system, and to sustain its vigour, or without even that power of digestion and assimilation which could convert it into sustenance, he sinks towards night into an uneasy slumber, crowded with phantasies, or oppressed with stupor, and rarely subsiding perfectly into the refreshment of a natural sleep. What wonder then, if, after a day without proper support, and a night without real repose, he rises weak and dispirited ; once more without all relish for appropriate nourishment, and without the courage to turn to any other resource than his career of yesterday ?

The trembling of the limbs, and especially of the hands, in the morning, becomes gradually more and more conspicuous, and demands with greater urgency the temporary relief which the use of spirits supplies ; the craving for the morning draught constituting thus the surest indication of the growing habit. The feeling of inability for protracted bodily exertion, or for continuous thought, contributes to the distress, and, by leading, or rather constraining, the victim to idleness, leaves him still more at the mercy of his unhappy propensities. Any unusual effort now brings on the oppressive sensations of tremor and sinking, at whatever periods of the day, and spirits are still in request to create a delusive vigour. The in-

capacity for fixing the attention, or for sustaining a train of connected thought, or even for any simple effort of the memory, may increase to such an extent as to amount to actual confusion of the ideas, and foretoken the near approach of that form of insanity known under the name of *delirium tremens*. Objects are seen floating before the vision like dark specks, which are frequently taken for spiders or other insects, and are the sources of peevish annoyance. There is now, occasionally, a hesitation in the utterance, as if the tongue and lips could no longer act together with the precision necessary for distinct enunciation. The sleep becomes still more unquiet, and is disturbed by sudden startings, and by spectral dreams. Various uneasy, creeping sensations pervade the system, evincing the perverted state of the nervous sensibility, and frequently give origin to singular and distressing illusions. The shaking of the hands increases, and subsists permanently throughout the day. The legs also lose their strength, shrink in their dimensions, and bend and tremble beneath the weight of the body. The gait is timid and unsteady, through giddiness sometimes as well as through weakness; and the attitude assumes an air of decrepitude, leaning for support upon contiguous objects, or stooping forward upon a staff. Clammy perspirations follow upon the slightest exertion. The fingers and toes lose frequently the power of distinct sensation, and the grasp is feeble and uncertain.

Even when not affected with the shaking delirium, he is subject to frequent hallucinations, especially when surrounded by an imperfect light. The distorted and terrible faces of men and animals grin before him, and imaginary

sounds and voices ring in his ears. Thoroughly unmanned, he is bound within a circle which is ever shrinking closer. His nervous debility, and general want of vigour, now make him even unwilling to assume the erect position, or to attempt motion, and he is first confined to his chair, and then to his bed. Morose and irritable, or even despairing, restless, but utterly incapable of exertion, with the sense of faintness and sinking ever oppressing him, and suffering in mind and in body, he still solicits eagerly his supply of ardent spirits, and indulges in them to the utmost of his power; though he can now usually tolerate them only in smaller quantities than at former periods. In proportion to the extent of each debauch of the day, has been throughout the degree of feebleness and distress of the succeeding morning; yet the voice which acknowledges, in the midst of tears of despondency, his errors, his lamentable condition, and its cause, puts forward, at the next instant, a plea of helplessness, and begs piteously for a renewal of the means of that intoxication, which is now ever as void of mirth as his intervals of soberness are full of agony.

It is another stage in his progress: and that which might have recently been regarded as a contemptible vice, has changed into a pitiless disease. With the past all bitterness, the present a bewildering torment, and the future a forecast of horror, it is an obvious part of the sad history that the state of the moral faculties of the drunkard has kept pace with the degradation of his frame. While any portion of vigour remained to him, the characteristic irritability of self-contempt led him to habitual excesses of petulance or of violence: but as his strength wanes,

his degradation begins to manifest itself rather in a peevish imbecility, which leaves him just force enough to move towards the gratification of his sensuality, through a system of petty falsehood, cunning, and even theft. This his abject spirit suggests, and his feebleness renders necessary, for the attainment of his object; and if he now be ever excited to outrage, it is only against women and children. Intemperance has been asked for elation and enjoyment, and it has flashed an illusion before the eyes of its victim, and left him debasement and pain.

Contemporaneously with these successive deteriorations, the functions of the organ of digestion have become more materially affected. The stomach ordinarily refuses to receive or to retain nourishment, and the nausea and oppression are incessant. Sometimes the matters vomited are merely pituitous, or consisting of viscid phlegm, more or less scanty in amount, and without colour; sometimes they are prodigiously abundant, of thin consistence, and of a greenish brown tinge. Under this condition, the emaciation cannot fail to make a rapid progress; while the deleterious effects of the spirits become aggravated in a double proportion, if taken without a proper accompaniment of solid matter to sheathe their pungency. Occasionally, especially in inveterate brandy-drinkers, the skin assumes a dingy brown tint, often with white patches<sup>1</sup>; or it acquires a parchment-like, or greyish-yellow appearance, and hangs in folds upon the meagre form. The eye too is watery and bloodshot, or of a yellowish tinge, and the usually dilated state of the pupil

<sup>1</sup> Bock, *Lehrbuch der pathol. Anatomie*, 1852, p. 306.

deprives it of its lustre and expression. Other forms of suffering harass the self-prostrated victim. Now, or at a still earlier stage, sudden and acute spasms dart along his limbs; or he is distressed with pains which are occasionally mistaken for those of rheumatism, and which may exist in the deeper parts, at the very time that the patient complains of a want of sensation in the skin. Sometimes convulsions occur, which may lapse into perfect epileptic seizures, terminating in unconsciousness, and followed by attacks of impotent frenzy.

Diarrhoea now usually succeeds to complete the exhaustion. The legs become distended with dropsical swellings; and sloughing, or mortification, of the parts chiefly subjected to pressure is not unfrequently added. Those muscles which are situated at the outlets for the principal excretions of the body become paralysed; and the sufferer, no longer able to retain his urine and his fæces, lies, as I have myself witnessed, in the midst of his ordure, often but slightly tended by those who have been wearied by the trials to which he has subjected them, and whose zeal, far too severely tested, has cooled with their afflictions. The features lose their mobility, and the countenance wears a vacant expression, denoting at once the depravation of the intellect, and the extinction of the vital energy. Thus universally assaulted, without rest, and without support, and alas! without sympathy, nature yields up the conflict. The senses and the intellect glide into utter imbecility, which expresses itself in vacant mumblings; and death, in a worldly sense a deliverance, terminates the miserable scene, the craving for spirits having not rarely subsisted to the close. One by one, the

lights have been removed from the banquet of folly, and the last is now extinguished.

Such are the leading outlines of this terrible picture, which has, however, its other numerous traits which I leave to the moralist to depict. Although the later fate of the drunkard is generally veiled from the public, as his weakness withdraws him from the scene, and his last miseries are apparent only to the family whom he has afflicted, still there are few observers who cannot appeal to their memory for examples of the general accuracy of the details which have been presented; and certainly the writer has not recorded a single circumstance for which he cannot assert, at least, the warrant of his own experience. But, as has been already seen in part, it is by no means always by this gradual decay of the system, that the drunkard approaches the termination of his existence. What has been here portrayed, is merely the effect of the pernicious habit in its most direct and simple form; setting aside, for the time, all consideration of those complications of accident or disorder which may arise during the deteriorating process, and which must be attributed to a precisely similar origin, but which may bring into more sudden, though not more certain, operation, the agencies destructive of life. To these causes of death, the unquestionable and frequently recurring products of intemperance, we shall afterwards have ample occasion to revert.

Neither do all the symptoms, in all cases, appear to the same extent, or in the same strict and uninterrupted sequence, as that which has been described. Sometimes the drinker pauses for a while in his career, either terri-

fied by the remote fate which it threatens, or temporarily disgusted with its more immediate consequences. If he be originally of a robust constitution, or accustomed to exercise in the open air, and especially if he retain an appetite for solid food, and the functions of digestion preserve for a while a condition of relative vigour, the process of decay is retarded; and the hardy toper, a rare exception, yet ever a lure of unlimited evil to the unwary, exults in an appearance of triumph over the natural effect of his excesses. It was not without justice that Dr Stephen Hales, speaking of such as these, quotes an observation of the late Bishop Berkeley, "that there was in every district, a tough drammist, who was the devil's decoy, to draw others in."<sup>1</sup> I have even seen certain hoary and notorious drunkards, who seemed to deceive themselves with the notion, not only that they escaped evil, but that they escaped detection.

On the other hand, if the drinker be of weak and delicate organization, or of sedentary habits, and already evince a tendency to morbid changes of structure in any of the important organs, the development of these changes is fatally accelerated by his intemperance, and the progress of decay is proportionally rapid. Occasionally, the effects of a course of medical treatment, directed with that aim, procure a pause in the race of destruction; until the instability of the will of the drinker again involves him in that which he ultimately converts into an inveterate propensity. Or, perhaps, without at any time forsaking his excesses, he may prosecute them with a degree of method and reserve which temporarily veils the

<sup>1</sup> Letter to Bishop Hildesley, May 16th, 1758.

habit from observation, and renders it less promptly hurtful; while another, unresisting and reckless, knows no other limit than the want of farther power to lift the draught to his lips, and proceeds headlong to his fate. But under all circumstances, and through whatever influence the career may be interrupted, or its effects moderated or retarded, if it be not wholly abandoned, its ultimate tendency is irresistible, and its sure conclusion one form or other of dishonourable death.

And at the close of this sad and humbling show, when the world shuts upon that at which it is shameful to look back, and opens upon that at which it is fearful to look forward, how completely sometimes does drunkenness destroy all love and all reverence! I have more than once witnessed the low drunkard at the deathbed of his fellow-drunkard, and would willingly spare to others the recollection of the horrors and the blasphemies of the scene. But, perhaps, it is as an unmarked and a homeless outcast that he closes his career. The picture of such a one is the same every where. He has neither inclination nor strength, says Clarus, to improve his condition by diligence and exertion, neglects ever more and more his domestic and social duties, and clings to brandy, to procure forgetfulness of his misery. Such men carry every pittance they can earn or beg to the nearest tavern, pine upon scanty and unwholesome food, retreat at night to some wretched hired pallet, or sleep under the open heaven, or beneath a gateway, or by the arch of a kiln; rise in the morning stiffened by cold and exhausted by famine; fly once more to spirits; and thus amid perpetual

excess, and without a single interval of entire consciousness, they live on for weeks and months. A life so frail, and so sorely tested, lies at the mercy of the merest accident, and a morning at last comes on which they never rise.

## CHAPTER VI.

### SPECIAL RESULTS—CONSTITUTIONAL

AMONG the more special results which may be justly attributed to the agency of intemperance, and to which we have already made a passing allusion, but which merit some closer examination, is that of convulsions; whether partial and incomplete, or presenting themselves in the more advanced form of perfect epilepsy.

Convulsions may occur at various periods of the career of the drunkard; and even at its earliest stages, if his constitutional tendencies be such as to favour their production. At first, they are frequently only partial, affecting a single limb, or a single division of the body, lasting generally for a few minutes, and recurring in more or less close succession. Sometimes they do not reappear for months, or even for years; and sometimes, especially where the pernicious habit of drinking has been only slightly established, and early abandoned, I have known the attack to be merely solitary. After the paroxysm has subsided, a feeling of general weakness and languor usually subsists for a short interval, but sometimes the recovery is complete and immediate.

The true epileptic seizure ordinarily presents itself among the later effects of habitual intemperance; and may either occur primarily, or as a farther development

of the slighter convulsive paroxysms. Sometimes preceded by a feeling of giddiness, or by a peculiar rushing sensation traversing some portion of the body, on other occasions it supervenes without previous warning, and the sufferer falls suddenly to the ground, devoid of sense, and his muscles almost universally jerking with rapid spasms. A more or less protracted period of quiescent stupor succeeds, and the fit terminates, leaving the patient languid and confused, with a feeling of weariness and aching throughout his limbs. There may be the utmost amount of irregularity in the accession of these paroxysms. At first the intervals may probably be of considerable length, but diminish with each successive recurrence : while, in the later attacks, the fits often follow each other consecutively, without any intermediate period of consciousness, until they terminate either in death, or in an attack of acute maniacal excitement. In one instance, the very first seizure, occurring in a man in the prime of life, and following immediately after an excessive debauch, was of the true epileptic character, without any previous convulsions of a milder description ; and, other paroxysms recurring in rapid succession, the patient perished in the course of a few days' illness. But I have had occasion to observe another example, occurring in the same complete form, in which the termination was more fortunate, there having been no reappearance of the paroxysms for a considerable series of years.

As the attack may occur during the night, or in sleep, or when the sufferer is remote from assistance, there is an additional danger of his becoming incidentally placed in such a position as to induce suffocation, or to lead to

other injuries of a serious description. That such fits really depend upon the agency of intemperance, is proved by their occurring in individuals who present the other more direct indications of the pernicious consequences of intoxicating drinks : and still better, by the circumstance of their complete cessation when the use of these drinks has been abandoned ; provided the reformation in the habits have taken place before the constitution has suffered, in other respects, irreparable injury, and, above all, before the intellectual faculties have shewn traces of being involved in the mischief.

Disorder of the function of digestion is, for the most part, one of the earliest tokens of the general depravation induced by intemperance. Almost the necessary consequence of even a casual debauch, and recurring at each repetition of the excess, a disturbed state of the stomach becomes a habitual condition ; and the degree of irritation thus excited, and maintained with appropriate energy by the stimulating nature of the intoxicating fluids, soon establishes permanent disease, in the form of chronic inflammation of that organ. The drinker begins to complain of a feeling of heat, weight and distension, occurring after meals. Eructions of sour or putrescent matter usually follow ; and at length, as the irritation advances, the greater proportion of the food is rejected by vomiting. At first, the nausea and sickness occur chiefly in the morning, and even before any portion of food has been taken ; but, during the later stages of intemperance, they occur more particularly after meals, and at any period of the day. The tongue frequently appears preternaturally clean, and of a deep red colour, as if

divested of the outer pellicle, or epithelium, which serves as a protection to the more sensitive and delicate structures beneath; affording, doubtless, a plain indication of the irritable condition of the lining membrane of the stomach itself.

Sometimes the vomiting is of pituitous matter, or phlegm, exclusively, and occasionally in very considerable quantities, the food being retained: and this may be remarked where the vomiting has occurred as a consequence even of every meal, the scanty nourishment, swallowed with difficulty, exciting, after a short interval, a perverted action of the stomach, yet itself escaping ejection. In other instances, the irritability of the stomach is so intense, that it is intolerant of the smallest portion of nutriment, and the vomiting subsists almost incessantly for many days; the matters ejected, in such cases, being usually copious, and of a bilious aspect. Where the food itself is ejected, after having been for some time retained, it is commonly in an acid, or highly offensive condition; no commoner illustration being adopted, than to describe it as resembling the taste and smell of rotten eggs. The breath is also noisome; the combination of putrid effluvia, and of the vapour of ardent spirits, mixed frequently with that of aromatic substances taken to mask the latter, rendering it characteristically offensive. The act of swallowing, especially substances of a slightly pungent quality, and even sometimes those of the mildest description, is accompanied frequently by a burning sensation in the gullet, affording farther evidence of the denuded and irritable condition of the mucous membrane. Where ulceration has established

itself in the stomach, the feeling of burning heat, on the reception of food, becomes peculiarly intense ; and dark-coloured matters, or even considerable quantities of blood, are frequently vomited.

Confirmed drunkards, of whatever age, but especially at the more advanced periods of life, are liable to an aggravated form of the disorder usually termed pyrosis, or water-brash ; in which, instead of actual vomiting, there is merely a regurgitation of watery fluids from the stomach, ejected by a kind of spouting, presenting various degrees of viscosity, often acid, less frequently alkaline, occasionally tasteless, and for the most part colourless, but sometimes with an admixture of matters of a darkish tinge. It is chiefly during the night that the liquid appears to accumulate in the stomach, and it is thus voided in the largest quantities in the morning ; but its exspusion may take place at any period of the day. The appetite of such individuals is usually all but extinguished ; or, if food be taken, it is ejected in part along with the watery fluids. The quantity of these may equal a pint at a time, and their expulsion is occasionally attended by attacks of general shivering. Chronic catarrh of the stomach is also an ordinary result. The constant efforts at clearing the throat which I have witnessed in persons thus affected, shew that the whole mucous lining of the gullet, as well as that of the stomach, is here also involved in the disorder ; and the nuisance of his incessant spitting is thus occasionally another, though assuredly one of the least noxious, of those characteristics which render the presence of the drunkard so generally intolerable.

Canstatt, in his valuable work on the diseases of old age, includes also, as one of the more rare results of habitual intemperance, a prodigious state of distension of the stomach, sometimes with thickening, and sometimes with an opposite condition of its coats, capable of containing an accumulation of many quarts, or even gallons of fluid. Such is the state of atony of the stomach in some instances of this affection, that its contents may even be voided by mere external pressure, and caused to flow out at the mouth as if by squeezing a bladder.<sup>1</sup> The expansion may either exist as a self-constituted disorder, or it may be complicated with such contractions of the lower orifice of the stomach as are fitted to impede the progress of its contents onwards;<sup>2</sup> and, in either case, the disease is described as having been traced in the majority of instances to a prolonged abuse of ardent spirits. Death, whether suddenly by perforation, or bursting of the stomach, or gradually by exhaustion preceded by dropsy, is the unfailing result.

These different states of disease are not developed with equal facility in all. Sometimes, as we have already hinted, the drinker retains a vigorous appetite for food, with a proportionately sound digestion, up to a very advanced period of his career of intemperance; but more frequently his impunity is of shorter duration, and a swiftly increasing emaciation denotes the degree of extinction of the process of nutrition. As the appetite declines, he continues to attempt to excite it by the use of spirits, which, for this purpose, are sometimes combined

<sup>1</sup> *Die Krankheiten des Höheren Alters*, b. ii. p. 269.

<sup>2</sup> *Morgagni, de sedibus et causis morborum*, Epist. lxx. 5.

with some medicinal bitter, under the pretext of removing that indigestion which he is anxious to attribute to anything but its proper source. A prop so delusive soon fails him, or rather has only served to aggravate the mischief. Incapable of receiving food, or if received, of retention, or if retained, of digestion, he is now almost reduced to spirits as his sole sustenance ; and a rapid impetus is given to those other tokens of decay which have been described in our more general outline.

Other portions of the intestinal canal become involved in the disorder, and the depravation of their functions contributes to the annihilation of the nutritive process. A vitiated chyme, or the mass of the food in the first stage of a corrupt digestion, is extruded from the stomach, to be brought into contact with a vitiated bile ; and the chyle, or that portion of the aliment which is destined to be absorbed into the system, to renovate its losses, partakes, when thus eliminated, of a like defective or injurious character. Thus the blood itself becomes impoverished and depraved ; and, as a first effect, is no longer capable of sustaining the brain and nervous system in their proper energies. Hence the springs of life are tainted at their source ; and their currents, diffusing themselves everywhere through the system, the one as the basis of vitality, the other as the origin of its leading phenomena, leave the traces of their altered qualities everywhere apparent. The functions of the lower intestines also are performed irregularly. Under more favourable circumstances, they are constipated ; but often a wasting diarrhoea prevails towards the close, and contributes powerfully to the universal exhaustion. Indeed,

there is scarcely any form of intestinal disease, of which the drunkard does not either provoke the existence, or aggravate the danger. Among other formidable accidents or disasters, copious evacuations of blood are occasionally encountered.

There is no organ, next to the stomach, which suffers more uniformly from the effects of intemperate habits than the liver. In those, especially, in whom the venous circulation predominates, and who have somewhat dark hair and complexion, we may anticipate the occurrence of this form of complication. In the early stages of intemperance, the frequent occurrence of vomiting of bile, a fluid abounding in carbon, appears to act by purifying the blood, and hence proves a source of temporary benefit; but as the liver becomes more deeply altered in structure, and more inefficient in function, and the bile is more sparingly and imperfectly eliminated, this source of safety ceases towards the close. The affection of the liver does not appear uniformly under the same aspect. Sometimes there is an appearance of jaundice, but the symptoms are transitory, as if merely indicative of a functional disorder: or the greyish-yellow tinge of the surface of the body may proceed from a depraved condition of the nutrition, dependent on other causes. In some instances, it is a slowly and imperceptibly developed inflammation which increases the bulk of the organ, and ultimately hinders its functions. For a considerable period it may continue difficult, or even impossible, to detect this form of disorder. Those symptoms, connected with the state of the digestion, which might have excited suspicion, are masked by the effect of the habi-

tual excesses : and pain in the side or shoulder, a jaundiced tint of the skin, or defect of bile in the evacuations, may either never subsist at all, or only shew themselves at a very advanced stage of the disease. In not a few cases, the enlargement is already considerable, while the patient still retains such an amount of corpulence as is sufficient to obscure any attempt at discovery through the unaided sense of touch. Under such circumstances, however, or where there is a complication of pectoral symptoms, the stethoscope presents its valuable assistance ; or we may succeed more especially by means of percussion, in tracing the dull sound of which it is usually easy to establish the existence, and to define the limits of the tumefaction. In others, the liver becomes actually diminished in size, when the detection of the disorder may be attended with farther difficulty ; and, indeed, there can be no doubt that there are numerous instances in which it is wholly overlooked. The drunkard, therefore, must not here plume himself upon safety, merely because he may still appear in possession of some of its outward tokens. Such an individual, in the prime of life, who had been engaged in his usual avocations till a few days previously, when he became indisposed, was found lying extended on the floor of his apartment, cold and rigid, having evidently been dead for several hours. On assisting his medical attendant at the post-mortem examination, we found the liver so much enlarged, especially on its upper convexity, that it extended as high as the fourth rib ; its whole substance being of a yellow-ochrey colour, and friable consistence, or, in other words, presenting the characteristics of what has been termed the

fatty liver. The abdomen was covered with a thick layer of fat, in which the muscles appeared pale and attenuated. The more immediate cause of death was, however, attributable to the state of the heart, which was softened, easily lacerable, and contained fibrinous concretions.

The abdominal dropsy of drunkards is usually connected with that peculiar form of liver-complaint which has been distinguished under the denomination of the granular or cirrhotic liver : a condition in which the organ becomes frequently contracted in its dimensions in a very remarkable degree. Yet dropsical effusion can, by no means, be considered as a necessary consequence of this particular degeneration ; and indeed dropsy of the abdomen, according to my own experience, is not a very general affection with those whose health has been ruined by habits of excess, and stands at least in anything but a direct relation with the frequency of disordered condition of the liver. But, independent of this special termination, if the progress of the hepatic disease be at first slow and obscure, its ultimate tendency is not the less serious. The yellow tinge, though still not in every instance, begins to appear in the eye, and may be detected diffused over the skin. The evacuations present the clay-coloured aspect, which denotes the absence of bile, or its widely altered qualities. A troublesome itching of the surface often causes additional and by no means insignificant annoyance. The functions of the stomach exhibit the irritable and depraved condition which has been already described ; and in the midst of wasting diarrhoea, sometimes extreme emaciation of the trunk, and watery swelling of the limbs, the patient sinks under the influence of a poison which

is still that of intemperance, though the peculiar tendencies of the individual may have slightly varied the quality and succession of its effects.

Another disease which, though not of very ordinary occurrence, seems to be connected in a marked manner with the habit of intoxication, is the affection termed Bright's disease, or granular degeneration of the kidney. In this affection, after a preliminary stage in which the vessels of the kidney present that accumulation of blood which is technically called congestion, the structure of the organ undergoes a remarkable change, usually becoming augmented in volume, paler in colour than natural, and of a peculiar granulated aspect. A result of this change is an altered condition of the urine, which, owing to the presence of albumen, becomes coagulable by heat, and by various chemical re-agents; and this perverted state of so important an excretion is attended with extensive and serious collateral affections of the general system, among the most marked of which are a depraved constitution of the blood, and watery swellings of the limbs, the hands, or the face, with dropsical accumulations in the larger cavities. This affection, like those of the liver, may approach, and with the drunkard usually does approach, so slowly and insidiously as for a time to elude detection, and its initiatory symptoms may be referred to other causes. Its tendencies are for the most part fatal; indeed, with the intemperate, uniformly fatal; not only through its own direct agency, but through the liability which it excites in the system to the attacks of other forms of disease, as apoplectic stupor, obstinate catarrhs, pleurisy, and diarrhoea. Thus, in still another

form, the toils are woven round the unhappy drinker ; and the deranged functions, and damaged structure, of the various organs of the system, with its corrupt juices, act and react upon each other, till the causes of death are multiplied, and close upon him in every direction.

It may be recognised as an additional proof that this dangerous disease has frequently its origin in intemperate habits, that, in a large proportion of cases, disorder of the liver, so usually the penalty of the drunkard, exists as its concomitant. But the question is set at rest by the experience of many eminent physicians, as well of this country as of the continent, who have seen its occurrence so frequently in individuals addicted to intemperance, as to have established that propensity as the most prevalent of its causes. Incontinence of urine, we have already noticed as a humiliating and offensive attendant upon the latter stages of the drunkard's decay. Diabetes, also, a disease almost universally fatal, has been regarded as occasionally proceeding from a like origin. My own experience, however, of this somewhat rare affection, has scarcely entitled me to consider it, in a single instance, as a direct product of intemperance.

The mechanism of the circulation shares in the general disorder. The arteries, especially those in the brain, become dilated, and weakened in their coats : hence, doubtless, the origin under certain circumstances, and the aggravation in all, of those various forms of palsy, complete or incomplete, to which the drunkard is liable. Apoplexy, in its perfect form, is a not unfrequent affection during all the stages of intemperance ; though it may, perhaps, be considered as more generally the consequence

of a habitual excess in the use of wine, than of ardent spirits. I have known it, however, to strike down the habitual spirit-drinker, even when already attenuated by his excesses, and to prove fatal without a moment's restoration to consciousness, and with more than the ordinary rapidity. As to those less violent attacks, in which the consciousness is either never wholly destroyed, or is speedily in some degree recovered, but in which a paralytic affection persists, usually of one complete side of the body, every one who knows the history of his neighbourhood must have remarked their occurrence ; and must have occasionally recognized the recent notorious sot in the abject cripple, who has been taught the danger of his vice by so severe a lesson, yet not always with the effect of constraining him into more than a short-lived repentance. The veins also are frequently observed to be dilated in the habitual drinker, and with this condition is ordinarily associated that tendency to the formation of incurable ulcers of the legs, and to those attacks of extensive erysipelas, to which he is observed to be subjected. He is liable also to attacks of palpitation ; and, although these seem really less prone to pass into actual organic disease of the heart than might have been anticipated, they are still known to terminate occasionally in sudden arrestment of its action ; while actual structural changes, chiefly in the form of fatty or earthy deposits, have occurred with sufficient frequency to have attracted the attention of all our best observers. The habitually excited state of the circulation determines the blood to the surface, and causes the face at first to be permanently flushed ; but this passes into a sallow or ashy hue when

the decay of the powers of life becomes extreme. Various forms of cutaneous eruption seem to be the result of this disordered condition of the circulation in the minute vessels of the skin : of these the scaly and itchy eruptions are the most prevalent. In one case which occurred to me, where the liver was so enormously enlarged as to occupy nearly a half of the entire cavity of the abdomen, the body was extensively covered with an eruption of the former description. The characteristic appearance of the drunkard's nose, it need scarcely be added, is seen sufficiently often to have rendered it everywhere a topic for sarcasm.

A distinguished authority<sup>1</sup> has ranked the abuse of spirituous liquors among the causes of tubercular degeneration, or of the deposit of those products of depraved nutrition which, when they occur in the lungs, constitute the origin of the widely fatal disease of pulmonary consumption. To attribute to such a cause even the occasional origin of a malady, which selects its victims so frequently from among the young, the pure, and the amiable, may appear to be asserting a doctrine which is little likely to be consistent with the truth. Certainly, in a disease so common as consumption, and with a vice so universal as drunkenness, it might be regarded as singular if they should not coincide occasionally in the same person ; and I have myself the vivid recollection of having repeatedly witnessed this peculiarly distressing union of vice and decay. But we see too universally the guardedly abstemious affected, to find it easy, on a first consideration,

<sup>1</sup> Sir James Clark, in *Cyclopaedia of Practical Medicine*, vol. iv. p. 321.

to assign any important special influence to habits of an opposite nature. Anxious to proceed upon a true induction, we bear in mind the recommendation of Paley,<sup>1</sup> that “in general propositions concerning drunkenness, no consequences should be included, but what are constant enough to be generally expected.” We shrink, therefore, now as heretofore, from all appearance of giving any false colour to the effects of habitual intoxication, which we know to be already sufficiently appalling where they are the most undeniable; and we have already hinted at the danger of an argument over-stated, or improperly applied, being used as a defence, and how the suggestion of an imaginary risk may be perverted into a blind for one that is real. Yet it would be frequently a source of serious error in medicine, if we did not admit, in at least a wide circle of cases, the possibility of a parity of effect from a diversity of cause, in form if not in essence. Whatever lowers or vitiates the action of the vital forces must tend to the promotion of a diseased nutrition; and thus intemperance may provoke upon the one hand, what hereditary disposition, or peculiar tendencies of constitution, or some other chain of causation, may excite on the other. When we consider also the familiar coincidence of fatty, or granular, disease of the liver with tubercular deposits in the lungs, and the known connexion of the fatty, and sometimes of the granular liver with habits of drunkenness, we naturally look with greater confidence towards the possibility of their occasionally common origin.

<sup>1</sup> *Principles of Moral and Political Philosophy*, b. iv. c. II.

It is strongly confirmatory of this, that in the researches at Laibach,<sup>1</sup> the large proportion, considering the nature and extent of the other causes of death to which the drunkard is peculiarly liable, of eleven per cent. was found to have perished from pulmonary consumption; while it may be cited as a remarkable coincidence, that of 357 drunkards, whose causes of death have been noted by Mr Neison,<sup>2</sup> in not less than 40, or in the same proportion of eleven per cent., it was found immediately attributable to this disorder. But we know that eleven per cent. is also near the proportion in which the male population of England, of all ages, dies of consumption, and that two-fifths of this number perish before the age of twenty-five; while, on the other hand, the main mortality from intemperance is long subsequent to that age. Thus, in so far as our evidence leads us, and holding in account the essential element of a parallelism of ages, it may be shewn that at the later period, when only about seven per cent. of the general mass of the population perish of consumption, not less than eleven per cent. of drunkards continue to die of the same disorder. Under this view, the facts evolved in the researches of Rokitansky,<sup>3</sup> which appear to shew as rare, though they by no means wholly exclude, the association of drunkenness with pulmonary consumption, and which partly proceed upon views regarding the nature of grey tubercle which are not shared in by other eminent pathologists, may be reconciled with opinions more generally current. "I have," says Huyde-

<sup>1</sup> Lippich, *Grundzüge zur Dipsobiastatistik*, p. 20.

<sup>2</sup> *Journal of Statistical Society*, vol. xlv. p. 210.

<sup>3</sup> *Handbuch der Pathol. Anatomie (die Saifer-Dyskrasie)*, b. i. p. 548.

coper,<sup>1</sup> “for a continuance of seven years, frequented, as one of the town clergy, the great military hospital at the Hague; and could I lay before you the number of those whom I saw expire there of pectoral complaints and consumption, and from whose dying lips I have heard the confession, that they acknowledged in their sufferings the consequences of their immoderate drinking, you would be astonished that so many, even in our father-land, should thus perish in the bloom of life.” This is certainly not medical testimony; but it is that of an able and enlightened clergyman, speaking of a fact which appeared sufficiently manifest to have arrested his own attention, and to have impressed itself on the minds of the sufferers; and, as such, it ought to go far with others, to outweigh any testimony or assertion of a merely negative description, from whatsoever quarter it may proceed.

It has chanced to myself to observe, that an idea of the protective power of a liberal use of ardent spirits against consumption has crept even into the popular mind, if it have not had its origin there; and I had recently under my eye the instance of a master-tradesman, threatened with pulmonary disease, who was carrying it into practice, with what probable results to himself and his family it is easy to anticipate. We may notice here, however, a fact reported by Dr Swett, physician to the New York Hospital, in a series of lectures on the diseases of the chest which he has lately published. “Two medical gentlemen,” he states, “attached to the dead-house of this city (New York), in which bodies are deposited which are

<sup>1</sup> *Een Woord, &c., over de Nederlandsche Vereeniging tot Afslachting van Sterken Drank* (Amsterdam, 1858), p. 174.

found on the streets, or without friends, discovered in seventy-four post-mortem examinations of those who had died of the most confirmed and aggravated intemperance, not a single case of tuberculous lungs."<sup>1</sup> In whatever way this may be judged to bear upon the question of the connexion between intemperance and disease of the lungs, we must at least receive the fact upon which it has arisen, as a characteristic illustration of the fate of the drunkard, miserably falling and perishing in the streets, unnoticed and uncared for. It must be kept in view, meanwhile, that the drunkard so rarely leaves himself to the natural course of events, and anticipates the ordinary causes of death through so many channels, that it can be no wonder, where the avenues to a fatal result are rendered so diversified and so numerous, that the influence of certain common diseases should be occasionally less distinctly marked than among the mass of the general population, who rather await the fate allotted to them by nature, than invite a different one by their own efforts. Other similar notions, with regard to the alleged immunity of the drunkard on this score, have appeared elsewhere ; but on these it will be unnecessary to dwell farther, as they have been usually advanced with a laxity of statement, and a congenial laxity of inference, casting them beyond the pale of legitimate science.

Catarrh of the lungs is, at all events, a frequent consequence of intemperance in its later stages ; and acute inflammation of the same organ, the result sometimes of the recklessness of his exposure to the weather, is by no means a rare penalty of the drunkard's vice at an earlier

<sup>1</sup> *Monthly Journal of Medical Science*, No. xxx p. 540.

period. This description of inflammation, in the mature drunkard, is remarkably fatal. In the cases which I have witnessed there was usually little pain, or it was masked by delirium ; but, along with the physical signs, and the rust-coloured expectoration, there was distressingly hurried breathing, irregular and tumultuous action of the heart, sometimes great mental depression, general agitation, faintness and tremors. Professor Engel<sup>1</sup> has marked its proneness to pass into mortification. The faculty of song is sometimes dangerous to the youthful lover of gaiety, as leading him among those scenes of conviviality where he can best gratify himself and others by the display of a talent so agreeable. But this very faculty is one of the surest to forsake him, if he once yield to the temptations with which it causes him to be surrounded ; and the voice of the confirmed drunkard soon loses its power and quality of tone. The only instance which I have seen of rheumatism of the diaphragm, a rare and exquisitely painful form of disorder, was in an individual who had recklessly exposed himself to cold, while under the influence of spirits.

It will be observed that, in the tenour of these remarks, we have spoken of none of these changes, singly, as the absolute and unconditional result of a life of intemperance. Even that which is of the most usual occurrence may fail to present itself, where the circumstances of the drinker, or his constitutional tendencies, are opposed to its development. Thus disease of the liver, though ordinarily one of the most inseparable concomitants of the drunkard's

<sup>1</sup> *Die Süßwärterkrankung : Zeitschrift der k. k. Gesellschaft der Ärzte zu Wien*, 1845, p. 178.

decay, may offer no traces of its existence where the disorder of the vital forces has been directed into other channels, as where the nervous system may have been the part principally assailed, and the sufferer has declined in the proportion that its energies have diminished and expired. Or the functions of the nervous system may remain comparatively intact, while those of the organs of digestion are fatally impaired. But, on the other hand, there are still more abundant instances, in which the deleterious influence appears to have received nowhere either modification or special direction, and in which the nervous and circulatory systems, the liver, the kidney, and the stomach, seem to be alike involved in the common ruin. In a remarkable, and perhaps, in one respect, a unique case, which occurred to me so far back as the year 1839, the patient, a discharged soldier, of intemperate habits, was tapped for dropsy twenty-nine times in a period of eight months; the aggregate quantity evacuated amounting to 580 pints. Yet the immediate cause of his death was not his dropsy, but a rapid attack of suffocative catarrh, contracted while lying out of bed all night in a fit of intoxication. On making an examination of the body, the stomach and intestines at the upper part of the abdomen were found bound together by numerous strong adhesions; the liver was not enlarged, but was indurated, of a yellow colour, and studded with tubercles; the spleen was of twice its ordinary size; the kidneys were affected with granular degeneration; the lungs presented tokens of both recent and former disease; and the heart was of unusually limited dimensions.

The very etymology of the word intoxication, it need

*Toξονία - άσθενεια - ον μέλη  
τοξίνη - ασθενεια - ον μέλη*

scarcely be remarked, implies an act of poisoning, and we have assuredly already stated enough to shew, that all drunkenness is in fact poisoning. But the ordinary reader does not, perhaps, realize the idea of a poison, under any other form than that immediate and obvious action which follows such substances as arsenic and opium, when received into the system; and it is even in this narrow and literal sense, also, that ardent spirits are powerfully deleterious. Whether the individual have been habituated to their use, and is already tottering to his fall, or whether some chance inducement has led him into a first debauch, if the spirits are swallowed in immoderate quantities, or with undue rapidity, the effects are often speedily and irremediably fatal; and this by their directly destructive agency merely, independently of those casualties to which we have previously alluded as besetting with danger the condition of the drunkard. The ordinary effect of ardent spirits is at first stimulating, and afterwards narcotic. In the worst form of poisoning from their excessive use, the insensibility sets in suddenly, and to an extreme extent, after the gulping down of a large quantity of the intoxicating fluid. So complete is the stupor, that all measures usually adopted to rouse to consciousness fail in producing the slightest effect; and tickling the throat with a feather, irritating the nostrils by means of pungent odours or otherwise, and forcibly pricking or pinching the skin, are alike insufficient. The pupils of the eyes may be either closely contracted, giving a singular expression to the countenance, which is not easily forgotten by those who have once witnessed it; or they may be dilated, and motionless on the approach of

an intense light, a condition which appears to be attended with more especial danger. The face is frequently livid, with tendency to tumidity, but sometimes ghastly pale; the surface cold; and the pulse feeble, or, perhaps, wholly imperceptible. This condition sometimes proceeds uninterruptedly to a fatal termination. The insensibility remains unbroken; the breathing may be weak and slow, and performed chiefly by the muscles of the abdomen, or it may be irregular, difficult, and snorting, and accompanied by a laborious heaving of the chest; the skin is moistened with chilly damps; the eyes are rolled upwards; the jaws are clenched; there is hiccup; occasionally general convulsions; and death ensues after a period which varies from one to twelve or eighteen hours.

But death may even take place almost instantaneously. Orfila mentions the instance of a soldier who drank eight pints of brandy for a wager, and fell dead on the spot. Nineteen individuals, says Casper,<sup>1</sup> were, in the course of ten years, struck down at Berlin, with the drinking-glass in their hands.<sup>2</sup> In a case seen by Dr Alison, death took place in twenty minutes after the state of lethargy began; and Mr Taylor adduces another, where a man died in half an hour after swallowing a bottle of gin. In those of tender years, the greatest caution is especially requisite to prevent their having accidental access to the use of spirits. With them, even a comparatively moderate quantity is generally sufficient to establish at once, and without

<sup>1</sup> *Beiträge sur Med. Stat. und Staatsarzneikunde*, p. 64.

<sup>2</sup> Sed tremor inter vina subit, calidumque trientem

Excutit e manibus—

In portam rigidos calcis extendit.—*Juvenal*, Sat. III.

warning from any previous elation or excitement, that intense stupor which leads rapidly to a fatal termination. Thus, the younger the victim, the less he shews of the ordinary signs of intoxication in its earlier stages, and the sooner he is overwhelmed by that oppression of the powers of life which threatens their immediate extinction. Yet, it has been not unusual to administer ardent spirits, even to infants, many of whom have thus become the hapless sacrifices to parental ignorance and folly. A child, a year and a-half old, had two table-spoonfuls of brandy given to soothe it. Immediately followed bloody diarrhoea, hiccup, convulsions, lock-jaw, and death in nine hours.<sup>1</sup> In a case seen by Rösch,<sup>2</sup> two table-spoonfuls, in all, of brandy, taken at short intervals, proved fatal to a healthy girl of four years of age, in spite of active medical assistance.

On the other hand, in individuals of whatever age, the state of insensibility may approach more slowly and gradually, and yet prove ultimately fatal. There may be considerable warmth of surface at first, with some vigour of pulse, which then also is usually slow; but after some time it rises in frequency, while it sinks in strength, and the temperature becomes proportionately lower. Sometimes one pupil is contracted while the other is dilated; the brows are corrugated, and the head rolls uneasily on the pillow; the stupor meanwhile deepening into unconsciousness. Dr Christison<sup>3</sup> has recorded an example of this gradual increase of insensibility, which

<sup>1</sup> Oesterlen, *Handbuch der Heilmittellehre* (5th Ed. 1853) p. 447.

<sup>2</sup> Henke's *Zeitschrift für die Staatsarzneikunde*, 1850, p. 257.

<sup>3</sup> *On Poisons*, p. 951.

may serve here, at the same time, to illustrate the rude and dangerous tricks indulged in by pot-companions. Two brothers drank in half an hour three bottles of porter, into which three half mutchkins (24 oz.) of whisky had been secretly mixed. In the course of drinking both became confused. In fifteen minutes after finishing the last bottle, one of them fell down insensible, and had no recollection of what happened for twelve hours ; but he recovered. The other staggered a considerable distance for an hour, and then became also insensible, and unable to stand. In four hours more, consciousness and sensibility were quite extinct, the breathing snorting and irregular, the pulse 80 and feeble, the pupils dilated and not contractile, and deglutition impossible. In this state he remained without any material change till his death, which took place in fifteen hours after he had finished his debauch. In another set of instances, the patient may be in a state of stupor, from which perhaps he may be roused to talk, and may remain conscious for an interval ; after which the insensibility recurs and persists to the close. An example of this kind is adduced by Dr Cooke,<sup>1</sup> on the authority of Mr Martindale, where a man drank two pints (32 oz.) of rum, one afternoon, and was in a state of stupor during most of the ensuing night. Next morning, though very drowsy, he was sensible when roused ; and in the evening he was considered convalescent. But two days afterwards he became delirious, and in two more he died, having again lapsed into a state of insensibility.

In all these cases, which must call to our recollection

<sup>1</sup> *On Nervous Diseases*, vol. i. p. 212.

#### SPECIAL RESULTS—CONSTITUTIONAL.

the fate of those who perish unhoused from the like causes, the amount of danger is indicated chiefly by the state of feebleness or deficiency of the pulse, the extent of reduction of the animal temperature, and the slowness or laboriousness of the breathing, rather than by the degree of stupor. Even in instances which have terminated in a prompt recovery, yet where I had judged the use of the stomach-pump, or of other energetic methods of treatment, essentially requisite, the unconsciousness has been so complete, that the employment of measures so disagreeable has neither been resisted at the time, nor left the faintest trace upon the memory afterwards.

There is, wholly distinct from this species of direct poisoning, an acute progress of decay in the drunkard, which has been well described by Rokitansky,<sup>1</sup> and of which I recollect myself to have seen one signal example. It develops itself only in the youthful drinker, still in the bloom of his years, and apparently full of muscular vigour. Probably it has its origin in an affection of the brain, from a recent violent and protracted state of intoxication ; the nervous centre being still, from the energetic vital actions of early manhood, highly susceptible of congestion, and of the influence of the alcohol with which the blood is impregnated. It runs its course with exceeding rapidity, leading to decomposition of the blood in a few days, and so to a fatal termination, the corpse tending rapidly to putrefaction. There are often found transudations of a dingy-red fluid ; fat in a globular form is discovered in the blood ; the lungs present the conges-

<sup>1</sup> *Handbuch der Pathol. Anatomie*, b. i. p. 548.

tion of gravitation, and there is frequently softening of the stomach.

Beyond all these, there is still an effect of the prolonged and excessive use of spirituous liquors, the importance of which is happily not to be measured by its frequency, but whose rare occurrence has been authenticated from so many creditable sources that we are constrained to attach to it a measure of belief; although the phenomenon may justly startle us, as much by the terrors of its aspect, as by its mystery and singularity. From time to time the public had been shocked by the accounts of individuals who had been alleged to have been found almost wholly consumed by a smouldering fire, which had arisen from no obvious origin, and had shewn little tendency to spread to other objects in its vicinity; or where the body had been actually seen with the lurid heat still preying upon its substance, and extending its ravages rather by a dull glow than by a visible flame. So much of fable appeared to be mixed with many of these narratives, that the just wariness of the learned hesitated for long to regard them as the legitimate property of science; but by degrees the instances were multiplied, and the facts were brought under the cognizance of competent observers, who were able to divest them of many of the fictitious attributes with which they had been clothed by popular credulity, and who collated them, when they had accumulated to a sufficient extent, so as to determine the leading and more universal features of their existence and origin. It appeared, therefore, no longer possible to deny, what it still seemed difficult to explain; while it would have been an error worse than credulity itself, if

the human intelligence had rejected the facts simply because they surpassed its comprehension, or were opposed to what was usually observed in the natural order of events.

Setting aside altogether those instances which appeared either of doubtful authority, or the details of which had not been furnished with sufficient fulness and accuracy, it was gleaned from a careful examination of the residue, that the persons who had been destroyed, more or less completely, in these combustions, were such as had been for long addicted to habits of gross intemperance ; that they were for the most part females ; that they had been usually of a corpulent figure ; that in many of the cases an extraordinary debauch had been the immediate forerunner of the event; and that the remains of the body were generally found lying upon the floor, in apartments where a candle, a fire, or some other source of heat or flame, was either still burning, or had been only recently extinguished. In none of the instances was the body utterly consumed : the parts left being usually a portion of the head, and the extremities of the limbs. The trunk was generally reduced to ashes, leaving nothing beyond these unless an oily matter, which diffused itself over the floor, and a light charcoal, of a greasy look and penetrating smell. The room was filled with a fetid and pungent vapour, in which a soot was suspended of similar offensive qualities, or was condensed upon the surrounding objects. The fire had been seldom communicated, in any considerable degree, to other combustible materials in the neighbourhood of the body, although some article of furniture in its immediate contact might be found partially burned, and the

clothes upon the person were generally destroyed. Where the combustion chanced to be witnessed during its progress, the flame was observed to be slight and dull, and of a bluish or dingy-red colour ; and occasionally the attempt to extinguish it by water seemed rather to rouse it into greater activity.

Among the many respectable authorities who vouch for the possibility of this terrible occurrence, we have the eminent names of Vicq-d'Azyr, Dupuytren, Orfila, Kopp, Friedrich, Henke, Treviranus, Nasse, Devergie, and others ; and several of these may be cited, not on the weaker ground of their speculative opinions, for mere opinion can never justly weigh much in a question of fact, but because they have been able to present instances of direct evidence. It is manifest that those instances must be the most valuable as proofs, which have been observed by men fitted, from their education and habits, to appreciate phenomena presenting themselves in the living organization ; and that, above all, such instances must be the most trustworthy, if they have occurred, and been so observed and recorded, in recent times, when a reasonable scepticism is accustomed, more than formerly, to submit the wonderful to a rigorous examination before admitting it as true. Dupuytren, of whose singular abilities as a surgeon, and efficiency as a public teacher, not one of his pupils can fail to retain a vivid recollection, has recorded the case of an aged female, who, for many years, had habituated herself to the use of wine and alcoholic liquors. Having returned to her home for the evening, she had seated herself over one of the foot-stoves commonly used in France ; and probably

stupified by the fumes of the charcoal burnt in it, had afterwards sunk down in such a position, that her limbs had remained in contact with the stove. The skin was found scorched in several parts, and entirely destroyed in others. She was very corpulent, and the fat had melted, adding fuel to the combustion, which had gradually spread over the whole body. The apparel, and the curtains of the bed, had been consumed ; and the floor was covered with a layer of oily fluid, of a yellowish colour and offensive smell, in the midst of which lay the remnants of the carcase.<sup>1</sup> Another comparatively recent instance has also occurred in France, the particulars of which were noted under legal authority by two medical practitioners, MM. Colson and Lelarge. A brewer at Beauvais, corpulent, and long addicted to excessive drinking, was found lying upon a brick floor, near an iron pot containing half consumed charcoal, the trunk and limbs being nearly wholly destroyed. Nothing else was injured in the apartment, unless a chair near the body, which was partially charred.<sup>2</sup>

In our own country, examples of a similar description have been recorded. Grace Pett, a fisherman's wife, of the parish of St Clements in Ipswich, aged about 60, had a custom of going down stairs every night, after she was half undressed. The daughter, who lay with her on the night of 9th April 1744, fell asleep, and did not miss her mother till early in the morning ; when dressing herself, and going down stairs, she found her mother's body lying on the right side, with her head against the grate,

<sup>1</sup> *Dictionnaire de Médecine*, t. v. p. 476.

<sup>2</sup> *Edinburgh Medical and Surgical Journal*, vol. xix. p. 655.

and extended over the hearth, with her legs on the deal floor, and appearing like a block of wood burning with a glowing fire without flame; on which, quenching it with two bowls of water, the smother and stench almost stifled the neighbours whom her cries had brought in. The trunk of the body was in a manner burned to a cinder, and appeared like a heap of charcoal covered with white ashes. The head, arms, legs, and thighs were also very much burned. There was a candle burned out in the socket of a candlestick, which stood by her. It was said that the woman had drank very plentifully of gin over night, on the occasion of a family merry making.<sup>1</sup> A somewhat more recent case appears in the Philosophical Transactions for the year 1774, on the authority of Mr Wilmer, a surgeon in Coventry, to whose testimony we may assign all the credibility which belongs to an eye-witness, and to a person of scientific habits of inquiry. The individual was one Mary Clues, aged 52 years, of an indifferent character, and so grossly addicted to drinking, that, during every day for a twelve-month, she had swallowed from half a pint to a quart of rum, or other spirits. She was found lying betwixt the bed and the fire-place, with solely the legs and one thigh unconsumed, the other parts being destroyed, and the bones calcined; while the furniture of the room had been only very slightly damaged, though everything was blackened and loaded with stench. A rushlight had been burning near the bed, and there was a fire in the grate.

<sup>1</sup> *Philosophical Transactions of Royal Society of London*, vol. xliii.

Positive testimony regarding two cases has been recently offered by Dr Ebers of Breslau: the one of a drunkard who had been smoking in a tavern; the other of a Baron v. R., addicted to drinking, who, after having partaken largely of brandy, had mounted his horse to proceed homewards. He was afterwards found lying dead upon the road, his face, hands, and a portion of the body being burned, and, it is said, not his clothes. Near him lay his tobacco-pipe. The latter case calls to recollection one somewhat similar in its circumstances, lately reported by Dr John Grigor, of Nairn,<sup>1</sup> which was the subject of an investigation by the legal authorities. The man, a carrier, had been accustomed to drink at least a bottle of ardent spirits daily, and was intoxicated at the time of his death. He was seen, from a distance, to descend from his cart, with smoke issuing from his person, and was found dead upon the road: his body black and incinerated; the eyes, ears, and nose burned away; his clothes being also nearly consumed, but the hay in the cart untouched. His tobacco-pipe was found lying beneath him. Devergie<sup>2</sup> records a case, from his own observation, of a washerwoman who had returned home, drunk, as was her uniform habit, in the evening, and on the following morning was discovered extended on the floor, nearly wholly consumed, and beneath her one of the ordinary foot-stoves. The whole of the muscles on the back were charred, and shrunk to an eighth of their usual bulk; part of the bones of the lower portion

<sup>1</sup> *Monthly Journal of Medical Science*, December 1852, p. 557.

<sup>2</sup> *Annales d'Hygiène Publique*, Oct. 1851, p. 285; *Bibliothek for Læger* (Kjöbenhavn), b. x. p. 370.

of the trunk were laid bare, and others, as well as the ribs, incinerated; and the sides and front of the body were in a like condition: yet muslin curtains hanging within three feet of the body were unharmed; and, of the scanty furniture, only the solitary stool upon which she sat had been destroyed, while even some small fragments of her dress remained unburned.

We have quoted these instances as characteristic and authentic examples of a form of death so singular and appalling. It would be easy to add to their number, as the aggregate of the cases now on record cannot be less than approaching to fifty, though all of these have not appeared in such a form as to render them available to the scientific enquirer. Several examples which have occurred in Ireland, within the present century, and especially a well-marked instance in the person of a Mrs Anne Nelis, are recorded by Dr Apjohn;<sup>1</sup> and we are indebted to Dr Andrew Duncan for observations of a similar description occurring in Scotland, but where the facts were complicated through circumstances which gave rise to suspicions of criminal interference, the possibility of which, we need scarcely add, should be always kept in view. A number of instances, and, among the rest, the notable case of a M. Thuar, is given likewise in an interesting memoir by M. Lair, which was published originally in the *Journal de Physique*, but was afterwards reproduced in an English dress by Mr Tilloch, in the *Philosophical Magazine*. In all the cases which we have quoted, as well as in those to which our limits have con-

<sup>1</sup> *Cyclopaedia of Practical Medicine: V. Spontaneous Combustion.*

strained us to make only a slight allusion, two features come prominently forward beyond the rest: first, that the individuals consumed had been addicted to intemperance; and, second, that they had been placed where their persons or clothes might have come in contact with substances in a state of ignition. Liebig<sup>1</sup> very justly calls attention to the circumstance, that nearly all the cases have occurred in countries where fires are used in open grates, as France, England, and Italy, while they have been rarely witnessed in those where close stoves are employed, as in Russia and Germany.

Of thirty-two instances which have been analytically examined by Dr Hergt, the whole number, with only such apparent exceptions as were unfit to stand the test of a rigid inquiry, were found to have been confirmed drunkards: of eight it was expressly mentioned that, on the eve of their unhappy catastrophe, they had been in a state of deep intoxication; and in only one is it distinctly asserted that there had been no fire in the apartment.<sup>2</sup> But even if the latter circumstance could be truly affirmed, it would be difficult to shew that there had been no possibility of access to fire for some of the ordinary domestic purposes, at a period immediately antecedent to the fatal occurrence. We revert to these circumstances, because they appear to yield the most efficient materials for an explanation of the phenomenon. It would have been impossible to have accounted for this combustion in the living body, by any reference to those familiar

<sup>1</sup> *Is de Zelfverbranding van het menschelijke lichaam al of niet mogelijk?* (Dutch Ed.) Haarlem, 1850, p. 4.

<sup>2</sup> *Rösch, der Missbrauch geistiger Getränke*, p. 1:1.

instances in which spontaneous ignition has taken place in inanimate matters, through the evolution of heat in chemical combinations; because the laws of organic life stand in antagonism to the play of affinities so purely chemical, the action of which can only commence when life has ceased, even where the conditions are otherwise favourable. And if we fail thus to account for the spontaneous origin of the burning, we cannot consider its occurrence as more easily explicable, through any consideration of the possible effects of an actual contact of flame with the human body, in life or after death, in its ordinary state: because it has been well evinced, both by what we learn of the funeral rites of the ancients, and by notorious examples in the annals of criminal jurisprudence, where murderers have attempted to remove the vestiges of their crime by burning the bodies of their victims, how difficult it is, and how large a pile, and consequent volume of fire, are requisite to complete the destruction; conditions which were wholly wanting in the instances referred to. Neither have we any evidence of the operation of any electrical agency, which might have been supposed to have been capable of kindling certain inflammable gases, which have been occasionally known to have accumulated within the living frame: nor can we even believe that these gases, if they had really existed, and had thus, or in any other manner, become ignited, could have given origin to a heat so continuously and intensely destructive. It only remains, therefore, to consider, that the degree of combustibility of the body must have been itself remarkably augmented, through some change or modification of its constituent parts, the

nature of which we shall afterwards be in a better position to demonstrate ; and that a casual application of fire had rendered this condition the means of constituting the strange and horrible species of death. The phenomenon, then, is not one of spontaneous combustion, as it has usually been termed, but of increased combustibleness of the human body ; and, although it thus loses some of its attributes of wonder, still, as an undoubted, though fortunately a rare, penalty of the vice of intemperance, it remains of too singular and interesting a description to be allowed to pass without distinct notice.

An example, bearing a marked resemblance to this extraordinary class of cases, and which can scarcely be considered otherwise than as closely analogous in its nature, has come under my own immediate cognizance. The mistress of an inn, approaching to sixty years of age, addicted to drinking, was seen in bed towards midnight by the other inmates. About an hour and a half afterwards, her daughter was aroused by a smell of burning ; when she proceeded to the kitchen, where she found her mother seated on the floor, at the opposite side from the fire-place, with her head resting on the corner of a chair, and the cheek leaning towards the side of a table closely adjacent. She was quite dead, with her clothes entirely burned from her person, and ignited sparks still fell from the corpse when it was moved ; but the remains of the combustion were now smothered by enveloping the body closely with a woollen covering. There was a fire in the kitchen grate. The following was the state of the body when seen nearly twelve hours afterwards. The whole of the surface, without exception, from the

scalp to the tips of the toes, the backs of which were vesicated, presented strongly marked traces of fire. The parts where these were least visible, were the soles of the feet, and a portion of the left side of the back ; but even in the latter of these situations the surface was reddened and denuded of the scarf-skin. Next to these parts, the legs, from a few inches below the knee, appeared to have suffered least; yet the skin was here everywhere scorched, and, over about half the extent, burned to blackness. The whole of the remainder of the trunk, as well as the arms and thighs, was hard, blackened, and torrefied; and the right side of the face, where it had been in proximity with the chair and table, was completely charred, while the left side of the face also presented the nearly universal blackness. The mouth was swollen and distorted, and the right eye destroyed. The body was moderately corpulent, and the burned surface generally had an unctuous feeling. The table and chair we found charred to the depth of fully a quarter of an inch, at the parts with which the head had come in immediate contact; but neither these, nor a large wooden press standing near, nor any of the rest of the furniture, shewed any farther traces of fire. Two large dark spots remained on the floor, where the body had been found, and which a subsequent washing had not removed. On touching them they felt greasy, and communicated a strong and peculiar empyreumatic odour. The dress, in which she had been lying in bed, was described as having consisted of a woollen shawl, a gown of cotton, a shift, a flannel petticoat, and worsted stockings. The shawl was found at a distance from the body, with the front partially consumed, and

still fastened by a pin, as if it had been laid aside by hastily drawing it over the head. The remarkable points in this case were the great torrefaction and incineration of the body, in relation to the presence of so small an amount of extraneous combustible material to account for the effect; and the circumstance, that the fire was communicated only to those limited portions of the furniture which were in immediate contact with the side of the head, which was itself the place where the charring of the body had proceeded farthest. As there were still marks of ignition upon the body, when discovered, it appears not unreasonable to suppose that the combustion might have proceeded still farther, had it remained undetected. As it was, it had gone widely beyond anything which I had previously witnessed, in instances where the clothes of females had caught fire and been consumed while the individual was in a state of insensibility, as is known, for example, to occur not unfrequently to persons afflicted with epilepsy.

While thus the largely destructive influence of habits of intemperance may be proved through their *direct* effects upon the human constitution, it must follow, as a necessary consequence, that the deterioration which they are capable of producing must give rise to many *indirect*, or collateral, effects also, and that thus a farther amount of evil must be continually threatened. The powers of the system, weakened, perverted, and deranged, are no longer competent to throw off disease, to repair injury, or to respond to the action of remedies; yet the liability to every form of extraneous disorder or of accident has

prodigiously increased. With the drunkard, slight diseases become dangerous, and severe ones desperate. If he be attacked with inflammation, the defibrinated blood cannot set up a restorative action, the disease is prone to assume a low and intractable form, and it passes rapidly into those advanced stages from which recovery is difficult or hopeless. Even if he should be able to resist the first assault of the disorder, he rarely conquers it wholly: its after consequences remain, and usually among these a notable tendency to relapse. Every epidemic visitation finds him open to its inroads, and he is approached by each in its most malignant aspect. The fever of the drunkard has a double danger. The Asiatic cholera, too, singles him out frequently from the midst of a group, and devotes him to all but certain death, where it leaves others unscathed; for the poverty, filth, and broken strength, which constitute the main liabilities to this pestilence, are involved in his very idea.

As his habits subject him to a greater risk of external injuries, so these become usually attended with greater peril. From the defective plasticity of the blood, the process of healing is induced with difficulty, and erysipelas and mortification are prone to occur; or a form of low delirium, identical with, or possessing many of the characters of delirium tremens, denotes the mingled feebleness and irritation of the system, and conduces to its exhaustion. Should a surgical operation be requisite, it is performed under like disadvantages. In our large hospitals, as indeed everywhere, a severe accident, or a severe operation, so encountered, points, for the most

part, to an event equally hopeless; even in cases where the constitution, in its original vigour, would have borne the sufferer to a triumphant recovery.

It is in this way that it becomes impossible to estimate the physical evils of intemperance in their full extent, and that the most elaborate of statistics fail to represent them. When we learn from Mr Farr, whose skilful management of the ample materials supplied to him by the system of general registration has produced a new era in the vital statistics of England, that in the years from 1838 to 1842, 892 persons were recorded as having perished from intemperance,<sup>1</sup> or that 1152 others died in the same period of the drunkard's delirium, we recognize here merely a sample of the more palpable consequences of the vice, but its real results are very feebly indicated. In the dropsies, the liver-complaints, the fevers, the deaths by violence, and in numerous other forms of destruction spread before us in the tables of mortality, we find the baneful effects of intemperance far more efficiently represented, than under those heads in which it is more directly designated; while experience has here so completely demonstrated its deleterious influence, that we are constrained to admit it in the one as unhesitatingly as in the other.

According to the careful investigations of Lippich,<sup>2</sup> it appears that of 100 drunkards, whose career had been accurately traced, not less than 52 had perished within the space of four years; the relative mortality of the women having been slightly greater than that of the

<sup>1</sup> *Seventh Annual Report of Registrar General*, pp. 63, 65.

<sup>2</sup> *Grundrige sur Dipsobiosiastik*, p. 4.

men. Each drunkard was liable, at an average, to a serious attack of illness every two years; and towards the close of his existence his whole life appeared as one long malady, in which the expiring pang was but the last throes on the rack of suffering, and yet the greater number dying in their prime. In the advanced stages of the vice, at least half of the attacks of disease terminated fatally; or there was a tenfold mortality beyond that produced in ordinary conditions. All common disorders became aggravated by tendencies to a nervous or putrid type, with rapid sinking of the strength; or by complications with affections of important organs, as the brain, the stomach, and the liver: while, here as elsewhere, they were frequently rendered still more intractable, by persistence in the use of intoxicating liquors during their progress. It was computed that about one in 120 of the whole population perished annually from excess, and that nearly a fourth of all the deaths, in mature years, might have been saved by a more guarded conduct. The mean expectation of life in the confirmed drunkard, at 50 years of age, was found to be as low as four years, while, according to the elaborate life-table of Mr Farr, the average expectation at that period, and in this country, is twenty years; so that, applying the rule of England, the drinker at this age had robbed himself, at an average, of four fifths of his probable existence. On the other hand, Lippich ascertained that, of 40 children, born of drunken parents, during the currency of their period of intemperance, six only could be considered as originally in possession of vigorous health; while two thirds of that offspring which might have been legitimately ex-

pected from sounder parents were nipped wholly in the bud.

In the remarkable paper by Mr Neison,<sup>1</sup> which we have already quoted, and which seems to have been drawn up without any acquaintance with the previous valuable researches of Lippich, we find many of these statements singularly confirmed. At the term of life from 21 to 30, or in the first vigour of manhood, it was found by this acute investigator, that the mortality of drunkards was upwards of five times, and, from 31 to 50, upwards of four times, that of the general community at like ages; and he remarks that, "if there be anything in the usages of society calculated to destroy life, the most powerful is certainly the inordinate use of strong drink." Mr Neison also found the mortality of drunken women relatively somewhat greater than that of the men. By a series of approximative calculations, he farther arrived at the conclusions, that, of every 74 of the male population, one is a drunkard; and that, out of all deaths occurring between the ages of 31 and 40, 41 and 50, and 51 and 60, the period of the matured man and the matured intellect, the proportions arising from intemperance were, respectively, one in 21, one in 16, and one in 22. We learn from Professor Huss,<sup>2</sup> that in the town of Eskilstun, in Sweden, containing nearly 4000 inhabitants, intemperance was carried to so great an extreme, even for that country, and with an effect so apparently destructive, that it was found, that of the whole number of males, one in 30, and of the females, one in 40, died yearly. He

<sup>1</sup> *Journal of Statistical Society*, vol. xiv. p. 200.

<sup>2</sup> *Om Sveriges Endemiska Sjukdomar*, (Stockholm, 1852), p. 119.

contrasts this with the district of Jemtland, where great moderation is prevalent, and where the annual deaths are only one in 78 of the males, and one in 82 of the females. If we look to our kindred stock, as it appears in the United States of America, we find that in 1851, of 3652 persons who died in Philadelphia, at above 20 years of age, 64 died of the direct effects of intemperance, and precisely the same number from the drunkard's shaking delirium ; yet only 7 from ordinary madness. This mortality from intemperance amounts to one in 28 $\frac{1}{2}$ , or 3 $\frac{1}{2}$  per cent. of the adult deaths at the age in question. Setting aside the females, the proportion was probably near one in 14, or 7 per cent. For the sake of an immediate contrast, we may add, that from madness, in the ordinary application of the term, the proportion was only one in 521 of the whole deaths : in the drunkard's delirium it was one in 57.<sup>1</sup> This appears originally as a merely incidental notice, and not adduced with any particular reference to the subject of intemperance. Yet, appalling as the fact really is, and confirmed though it be by the experience of the same city in former years, how inadequately does it still represent the true mortality from drunkenness, as we have already described it ! Another illustration from America is afforded by Dr Forrey, who, in his observations founded on the records of the medical department of the United States army, attributes to this vice more than half the deaths among the soldiers. Huydecoper states,<sup>2</sup> that among the Dutch it is usually reckoned that

<sup>1</sup> Dr Ruschenberger, in *Transactions of College of Physicians of Philadelphia*, new series, vol. i. p. 802.

<sup>2</sup> *Een Woord, &c., over de Ned. Vereen. tot Afsch. van Sterken Drank*, Amsterdam, 1853, p. 2.

of 100 of their soldiers, sent to service in the East Indies, from 70 to 75 perish from immoderate drinking. It is thus little less than obvious, even allowing here for somewhat of a tendency to exaggeration, that, with this paucity of offspring and this wide fatality, could we contemplate the possibility of drinking habits becoming universal, their results would be the complete annihilation of the human race at no distant period; just as already more than one tribe of the savages of the new world have actually been known to become extinct under the influence of the "fire-water." Fever and pestilence may visit us at intervals, and mark their progress by terror and desolation: but drunkenness is worse than the pest, for its blight is unceasingly among us, and sinks deeper, wider, and more permanently into the vitals of society. Yet the bulk of mankind, with its habitual apathy towards all matters with which it comes in daily contact, and which, for that very reason, it should regard with the more intense anxiety, looks on with cool indifference.

But the catalogue of evils is not yet summed up. Those moral and intellectual faculties which should have stood forward as the guardians of the drunkard, have yielded and been prostrated, like his physical organization. This crowning and saddest effect has already been hinted at; but we have purposely refrained from entering closely upon its discussion, till the progress of our remarks could enable us to place it in that separate view which its importance merits. To this painful degradation of our nobler and immortal nature, as the result of intemperance, we shall now seek to transfer the attention of the reader.

## CHAPTER VII.

### SPECIAL RESULTS—MENTAL

WHEN the stimulus of ardent spirits continues to be applied excessively, after the capacity for receiving food has materially diminished, the vital powers begin to waver under the effects of an excitement, the exhaustion from which is only masked by new excitements, instead of being relieved by that repose and real sustenance which are needed to renovate the waste of the system. It is this excitement without strength, which, operating upon the nervous system, lays the foundation for that form of mental aberration known under the name of delirium tremens, or shaking delirium.

This form of temporary insanity is sometimes sudden in its onset, and may affect, though certainly rarely, those who are not habitual drinkers, but who, perhaps on the occasion of some extraordinary festivity, have entered into a casual debauch, deeper and more prolonged, and attended with greater deprivation of rest, than is consistent with safety. Far more frequently, however, it attacks the confirmed drunkard, and foretokens its appearance by certain signs of nervous excitability, which denote the gradual operation of its cause. After a succession of debauches of more than usual extent or continuance, he

begins to complain of headache, sleeplessness, and general discomfort. Illusions, of various descriptions, occasionally mock his senses. He hears sounds, and sees objects, which have no existence unless in his misconstrued perceptions ; and these even proceed so far as to constitute, sometimes, actual hallucinations, which are perhaps soon dissipated, but recur after a short interval. Along with these there is already, in the great majority of instances, that conspicuous tremor or shaking of the limbs, and especially of the hands and arms, which has served to designate the disorder. As the attack advances, with greater or less rapidity, the irritation and sleeplessness continue and augment ; the pulse is weak and rapid ; the face flushed ; the eyes injected ; and the agitation and incoherence of ideas become uninterrupted and extreme. Even the tongue trembles when it is protruded from the mouth. The skin is covered with a clammy perspiration.

The patient is now beset by continual hallucinations ; and, though authors have represented these as occasionally of a pleasing description, my own experience has presented to me only two individuals, and one of these only on a single occasion, occupied with ideas which had the slightest approach to a cheerful character. Usually he suffers from the deepest depression of spirits, and looks uneasily and watchfully round for the occurrence of some fearful disaster which he dreads and anticipates. He often fancies that some conspiracy is forming against him, and fears a serious injury to his fortunes, his reputation, or his person. One individual I recollect, who lay cowering on a sofa, starting frequently, and giving utterance to sharp and sudden cries. Each exclamation

was caused by the reception of a shot aimed at him by persons within the room ; and he promptly accounted for no report being heard, by the assertion that the bullets were discharged from air-guns. One will stand trembling upon a table, with the perspiration gushing down his cheeks, and his face stretched up towards the ceiling, to save himself from being drowned in the water which he believes has flowed into the apartment, and has already mounted to his lips. Another, dreading an opposite fate, sees a funeral pile prepared, upon which he is to be consumed alive ; and frantic with alarm, struggling incessantly, dies exhausted. Another is accused of some enormous crime, and the officers of justice are at the door ; or a voice summons him into eternity, and he quails in fear of immediate death ; or supernatural beings speak to him from the wall, or surround him, or sit beside him, and he moves to and fro in an agony of terror. The delusion may readily connect itself with some topic of the day, which has intensely occupied the public attention. Thus, in 1829, a patient under my charge was distressed through the fictitious fear of being apprehended, for having had a share in the system of trepanning and murder, for the purposes of the dissecting rooms, which was detected about that time in Edinburgh, and for which the infamous Burke suffered execution ; although the excessively puny form of the individual might alone have secured him from suspicion of having ever inflicted injury upon any one save himself.

Sometimes the sufferer is inordinately loquacious ; at others he seems overwhelmed with melancholy, sighs often, and refuses to speak. Occasionally the delusions

are of such a character, as to appear connected with that creeping sensation, which we have elsewhere described as a cause of annoyance with drunkards. One patient complained to me of maggots which had got into his eyes; and another of worms which infested his left hand, which he saw creeping out between his fingers, and to rid him of which he peremptorily insisted that I should perform amputation. Some are engaged in imaginary mouse and rat-catching; illusions possibly dependent upon a similar origin. One individual I recollect, who was continually occupied in puffing smartly, to blow away winged insects that annoyed him. Another will leap from his bed, because it is covered with leeches, or swarming with serpents. Certain of the illusions present thus, in wakeful misery, an analogy with those of the sufferer from nightmare: where some real yet trifling sensation, external or internal, instils itself into the perturbed consciousness of the dreamer; and becomes, through his incapacity to refer effects to their causes, or to give a just interpretation to the effects themselves, magnified into some exaggerated form of prodigy or of distress.

Though almost incessantly occupied with the themes of his imagination, the patient is generally capable of being roused by questions relative to his real condition, of the nature of which he may even seem for a time to be fully aware. But in a few instants his delusions predominate: his eye, which rarely rests upon the bystanders, peers hurriedly from side to side; and he is surrounded by his former horrors. Again, the delusions are sometimes pitifully ludicrous. One patient saw hummingbirds, with dogs' heads, which nevertheless he declared

to be of surpassing beauty, flying about his room, and perching on his bed. Two of them had acted Punch and Toby in a manner which he had found supremely diverting. Another patient was teased with a group of glasses of gin, which kept up a merry dance before him. This miserable condition, the peculiar features of which impress themselves indelibly on the spectator, endures usually for a few days, and may end favourably, even without treatment, in a critical sleep; but it may be protracted in a less acute form for several weeks, and may even terminate in lasting insanity. Where the attacks have recurred frequently, they may lead to convulsions, stupor, and death; or they prove fatal through extreme exhaustion. As a proof of its not rare fatality, we may recal here the important statement, made with reference to the experience of the city of Philadelphia, that while, in a year, seven only are said to have died there of ordinary madness, important as are frequently its complications, and terrible and exhausting its struggles, not less than sixty-four are recorded to have perished from the drunkard's delirium. As to any violence exhibited in the disorder, it may easily be gathered from our description, that it must be rather the result of despair than of direct courage. It occurs only when the spirit of the victim has fled before its torments till it can flee no longer, and stands at bay: when a blow aimed against the life of another, or far more frequently against his own existence, may be the result of his frenzy.

- It has been usual to consider, that a sudden discontinuance of the use of spirits, after a protracted excess, is the ordinary immediate cause of an attack of the shaking

delirium. My own experience, however, has been uniformly of an opposite description; and I have, in every instance, known the excess to have been continued uninterrupted up to the accession of the initiatory symptoms of the attack. Even, in not a few instances, I have seen an intense craving for spirits continue after the attack had become fully developed, although the opposite statement is not unusually insisted upon by other observers. For this reason, it has rarely appeared to me necessary to hesitate in interdicting instantly the further use of the intoxicating liquids, even in moderated doses; nor have I ever known cause to regret this decision, which has freed me, in a majority of instances, from the position of appearing to justify the drinker in his habits, at any time, or under any circumstances. How many drunkards, we may reflect, are everywhere committed to prison, and instantly deprived of all access to intoxicating liquors, not only without prejudice, but with the utmost benefit to their health. The evidence, to this effect, of the state prisons of America, is of the most extensive and conclusive description. In the lunatic asylum at Hildesheim, it is computed that every sixth or seventh inmate has been driven into insanity by habits of intemperance; and it was at one time usual here, in deference to the prejudice as to the danger of a sudden withdrawal of habitual stimulants, to continue to allow small portions of brandy to the patients, after their admission. For many years past, however, Dr Bergmann has wholly abolished this custom, and with manifest advantage. In the treatment of the insane, whose disease has been known to have been brought on by the excessive use of

whisky, Dr Skae, of the Royal Edinburgh Asylum, has not found any bad effect to result from the sudden and total interdiction of its use ; but, on the contrary, it appeared to be the method ultimately most agreeable to the patients themselves, the complete suspension of the stimulants being followed in a short time by a complete absence of the craving for them.<sup>1</sup> Dr Schnitger, of Schwalenberg, has had the opportunity, in the course of nine years, of observing 720 brandy-drinkers. To 16 or 18 of these, who appeared dangerously sick and weak, small portions of wine or beer were allowed as substitutes for the spirits, while upon the remainder total abstinence was enforced ; and yet, not only did no prejudicial effect ensue from the sudden disuse, but most of the individuals, even within from eight to fourteen days, averred that they felt themselves re-invigorated, and, as it were, renewed in years.<sup>2</sup> A medical officer serving in India informed Dr Carpenter, on the other hand, that within two months after the arrival of an order for the discontinuance of temperance societies among the troops, he had eighty cases of delirium tremens in his own regiment.<sup>3</sup> Had the disease usually followed upon a sudden abstinence, it should have been remarked as succeeding rather the establishment, than the abolition of such societies. It is confirmatory of this, that in the attempt to cure drunkards by satiating them with spirits mixed everywhere in their food, delirium tremens has not rarely arisen as an effect of the treatment ; a fact here of large significance.<sup>4</sup>

<sup>1</sup> *Report of Royal Edinburgh Asylum for 1853*, p. 83.

<sup>2</sup> Schönfeld, *Wunden des Branteweintrinkers*, p. 199.

<sup>3</sup> *Physiology of Temperance*, p. 102.

<sup>4</sup> *Förhandlingar vid Svenska Läkare-Sällskapets Sammankomster*, Stockholm, 1847-48, p. 18.

It is not the less true, that there is a form of aberration, which may occur either to the temperate or the intemperate, which is dependent upon exhaustion, and which occasionally presents itself at the close of acute maladies, especially such as have required energetic treatment, where the delirium may resemble that which we have just described, yet where it can be best allayed by the judicious use of wine, or other stimulants. But the discrimination of such cases, and they admit of a perfect discrimination, must be left to the reflecting practitioner, who will be careful not to render any rule too absolute, and who will resort to the appropriate remedy, as each distinct occasion may appear to demand. Should stimulants really be necessary to relieve extreme exhaustion in the delirium of the drunkard, it will at least be prudent to administer them disguised in some form to which he has not been accustomed ; so as to lessen his power of appealing afterwards to a precedent, which he may convert into a plea for his excess. I have, in this way, found wine-whey occasionally useful. But not rarely also, even at the commencement of acute diseases in the drunkard, such as inflammation of the lungs, or where he has newly encountered any severe shocks from accident or injury, these become promptly associated with the shaking delirium : the exhausted system yielding rapidly to the double assault of the disaster and the habit, and the complication which ensues constituting a condition of extreme danger. Here, too, the practitioner will have ample room and necessity for the exercise of his skill and prudence.

In individuals naturally of an irritable and violent

temper, especially if of robust frame, and conscious of superior strength, the ordinary paroxysm of intoxication will sometimes lead to a degree of furious excitement, which has all the characteristics of a fit of insanity. In the excitement of delirium tremens, we have seen, if the patient be roused into violence, it is usually that of fear exalted into desperation, through anxiety to escape some visionary evil. But here the individual rushes gratuitously into every form of danger, and perpetrates every description of outrage. On the slightest provocation, or suspicion of provocation, he starts into fury ; his eyes flash or roll wildly ; he breaks and destroys objects ; and bites, strikes, or inflicts still more reckless injury upon persons. When he recovers his senses, as the intoxication becomes dissipated, he retains usually a vague remembrance of events, as if they had been acted, or had passed before him, in a disturbed and painful dream. Individuals who, at a former period of their lives, have suffered from severe injuries of the head, evince an especial proneness to this condition, even when under the influence of a comparatively moderate portion of intoxicating drinks. Where the individual has been previously prone to melancholy, habits of drinking, designed to alleviate it, tend rather to darken it into the deepest form of mental disorder. In some drinkers, the derangement takes the form of incoherence, in which the thoughts lose all connexion with each other, and the patient remains incessantly busy with an irrational and aimless bustle and loquacity. Ramaer<sup>1</sup> mentions the case of a young and beautiful lady, who was thrown into this state by having

<sup>1</sup> *Dronkenschap en Krankzinnheid* (Tiel, 1862) p. 76.

followed too freely the advice of a physician, who had recommended to her egg and brandy to remove a feeling of exhaustion of which she had complained.

Wherever tendencies of the kind exist, and are frequently called into operation, or where the individual has already undergone repeated attacks of the shaking delirium, his condition is liable to pass into a more continuous form of disorder, and he becomes permanently insane. At first, it is true, there may be lucid intervals of longer or shorter duration ; but these generally become speedily narrowed in their limits, and finally disappear, unless it have been possible to procure a cessation of the cause of the derangement, and the patient have been otherwise subjected to judicious treatment. In an instance of this description, a principal delusion of the lunatic from drinking was, that his wife possessed the secret of adding a minute portion of a certain powder to any quantity of water, by which she could convert it into a like quantity of whisky ; and that she thus easily secured to herself the means of being constantly drunk, a privilege which he was less willing to concede to her than to appropriate to himself. As a punishment for her sorcery, he was one day found engaged in attempting to thrust the unfortunate woman upon a burning fire, when the authorities happily interfered. He produced the powder before the magistrate, when, being present in a medical capacity, I suspected its nature at a first glance ; and causing it to be dissolved in water, and adding a few drops of tincture of iodine, shewed it to be common starch. The man, now long since dead, was committed to an asylum, from which, however, he was some time afterwards prematurely

discharged, still retaining his delusion, and apparently still with the same propensity to assert it by violence. It should be stated here that, according to an observation of Ideler,<sup>1</sup> true insanity occurs more rarely after the drunkard's delirium, than after continued indulgence in spirituous liquors, even when not carried to the extent of intoxication.

The proportion of cases of insanity, occurring as a result of intemperance, great as it really is, appears even less considerable than might have been anticipated, when we consider the nature and the extent of the action of intoxicating drinks upon the imagination and the intellect. The constantly recurring excitement of the brain and nervous system, with the accompanying disturbance of those mental faculties of which the former is the material organ, thus necessarily occasioned, along with the blighting effects of the vice upon good name, happiness, and fortune, might have taught us to expect that functions so delicate as are here implicated could not possibly, even in a single instance, withstand a series of assaults so rude and so continuous. We cannot, then, be surprised that intemperance, next to hereditary predisposition, should rank as the most common of all the causes of mental derangement; while we must admit that its influence, in this respect, is little likely to have been exaggerated, as those engaged in investigations on the subject would probably, through causes which may be easily imagined, become acquainted with only the more flagrant instances of habitual excess. And, in this point of view, it must

<sup>1</sup> Feuchtersleben's *Principles of Medical Psychology* (Syd. Soc. Ed.), p. 214.

be farther recollect, that there cannot fail to be a wide range of cases, in which intemperance must have operated really as the predisposing cause; weakening and perturbing the faculties to the utmost verge of reason, yet without passing manifestly beyond it, till some new and distinct circumstance of aggravation completed the overthrow, and became admitted as the efficient cause of the insanity, of which it was merely the nearest antecedent in point of time, though the remotest in force of agency. It must be admitted, however, beyond this, that the statistics of insanity are not yet in that advanced position, which can justify us in drawing any other than merely approximative conclusions, with regard to its prevalence and its leading causes; while we may rest assured, that there are multiform ways in which intemperance may, and does, exert an influence, direct or indirect, upon the faculties of the mind, so as to induce derangement, many of which are obvious enough, yet which have never been sufficiently insisted on, and possibly can never become matter for exact computation.

It has been stated that in France, of 10,111 lunatics, 792, or one in 13, owed their unfortunate condition to habits of intemperance: and in those institutions chiefly occupied by the middle classes, Royer Collard has estimated the proportion as high as one in ten. The eminent Dr Prichard, in his valuable treatise on mental disorders,<sup>1</sup> scarcely does justice to the statements of the experienced Esquirol, when he represents him as declaring this vice as by no means a frequent cause of in-

<sup>1</sup> *Treatise on Insanity*, p. 205.

sanity in France, even in the lower classes. On the contrary, the French writer states that in his country "it is not rare, as may be proved by observing the lunatics at Bicêtre and Charenton":<sup>1</sup> and, on turning to another portion of his work,<sup>2</sup> we find that of 1375 cases admitted into the latter hospital, 134, or about one in ten, were attributed to the abuse of alcoholic drinks; while a farther number of 146 are included under the more vague head of "libertinism, excesses of every description." At all events, so far was this distinguished author from underrating generally the effects of intemperance, on this score, that he probably even steps beyond the limits of strict truth, when he states that, in England, the abuse of intoxicating drinks produces half the total cases of insanity, and in America, three-fourths of the insanity and a like proportion of the crime; and that the same may be alleged of the northern countries of Europe.

In Berlin, at least, it has been estimated from official documents, that every third case of lunacy among the lower classes is the result of intemperance; in Wurtemburg, the same proportion has been recorded by Zeller; while in Göttingen, according to Marx, most of the examples of mental derangement which occurred there, during the years from 1813 to 1822, were of individuals in whom the abuse of ardent spirits had operated as a principal cause.<sup>3</sup> In Sweden also, Professor Huss con-

<sup>1</sup> "En France elle n'est pas rare, comme on peut s'en convaincre en observant les aliénés de Bicêtre et de Charenton." *Maladies Mentales*, t. i. p. 47. It is true he adds (p. 48), that in his own establishment, the proportion has been only one in 110; but this was merely a single private asylum, and destined for a class in whom excess in drinking was not conspicuously prevalent.

<sup>2</sup> Op. citat. t. ii. p. 682.

<sup>3</sup> Casper, *Beiträge sur med. Statistik*, p. 62.

siders that about half the amount of insanity in males is caused by intemperance.<sup>1</sup> Of from sixty to seventy men, received into the asylum at Stockholm, Dr Sonden states that it could only be said of ten, that their derangement had not taken its origin in inordinate drinking.<sup>2</sup> From Russia we derive similar lessons of experience. In the great asylum at St Petersburgh, the physicians, during ten years, have divided the patients under their charge into three classes; and have given as the result, that of 966 lunatics, admitted during this period, immoderate drinking was in 150 the sole cause, in 497 a collateral cause, and in 129 only was without connection with the origin of the disorder. In Denmark, according to statistics compiled by Dr Hübertz, it appears that of 1000 lunatics, the cause of their condition was assigned in 84 to the abuse of spirituous liquors, and in 11 to the like vice on the part of the parents.<sup>3</sup>

But Dr Prichard is himself fully sensible of the immense influence of this propensity; and he adds, that it is generally known that dram-drinking is the exciting cause of a great proportion of cases, in the public lunatic asylums of this country, and confirms his statement by quoting the authority of Dr Whally, with reference to that of Lancaster. Indeed the experience of every asylum in the United Kingdom, in so far as the details are known to me, bears testimony of a similar purport. Thus, among others, in a report by the late Dr Hutchison, physician of the Glasgow Royal Asylum for Lunatics, drunkenness is

<sup>1</sup> *Om Sveriges Endemiska Sjukdomar*, p. 120.

<sup>2</sup> *Förh. vid Svenska Läkare-Sällsk. Sammankomster*, Stockholm, 1850, p. 63.

<sup>3</sup> *Journal des Economistes*, Avril, 1854, p. 136.

assigned as a cause of insanity, in one of every five of the patients admitted.<sup>1</sup> Dr Browne, of the Royal Institution at Dumfries,<sup>2</sup> describes the applications for the introduction of individuals who have lost reason from excessive drinking, as very numerous; and, in the Edinburgh Asylum, it appears from reports, which, like those already quoted, happen to be at present before me, that the proportion, in 1841, was one in six of the total admissions; while, in a report so recent as that for 1853, drawn up by a different superintending physician, it is rated at so high as an average of 23.6 per cent., or one in about four (4.24) of the number of patients annually admitted during the five years preceding.<sup>3</sup> These results, derived from the experience of independent observers, are too nearly uniform, and too striking, not to be entitled to confidence and serious attention. If we examine this subject from a different point of view, and consider the number of lunatics in relation to extent of population, we shall find that those countries which are distinguished for their sobriety, are also those where there is the lowest proportion of cases of insanity. Thus in Italy, there has been estimated to be only one lunatic in 3,785 of the population, and in France there is one in 1,750, though some have ranged the proportion as high as one in 1000; while in Holland there is one in 1000,<sup>4</sup> in England one in 783, in Sweden one in 770, in New York one in 721, in Scotland one in 575, in Brunswick one in 539, in

<sup>1</sup> *Report of Royal Asylum for Lunatics, Glasgow, 1842*, p. 23. See also later reports.

<sup>2</sup> *Report for Crichton Royal Institution for Lunatics, 1842*, p. 10.

<sup>3</sup> *Report of Royal Edinburgh Asylum, 1841*, p. 8; 1853, p. 22.

<sup>4</sup> *Fruys van der Hoeven, Anthropologisch Onderzoek, Leiden, 1851*, b. 1 p. 186.

Denmark one in 532, and in Norway one in 309;<sup>1</sup> the ratio increasing pretty nearly as the addictedness to habits of intemperance is known to increase, yet the calculation, though trustworthy, in so far, from its consistent breadth of statement, resting nowhere on so precise a basis as to claim an implicit reliance.

Were the statistics of insanity to be examined with reference to the male sex exclusively, the unfavourable results would appear still more striking and extensive. For it is worthy of notice, that, while females generally are not less liable to mental derangement than males, the efficiency of intemperance, as an exciting cause of that derangement, is remarkably less in the former than in the latter; and it may be stated, with still more conspicuous truth, that, of a given number of instances of female intemperance, an infinitely smaller proportion will become affected with the shaking delirium than in the stronger sex. There is, doubtless, something in the less strenuous character of the female constitution, which protects it, to a certain extent, from that violence of excitement which follows the use of alcoholic liquors in the male; and which renders the functions of her nervous system less easily disturbed, and, consequently, less liable to serious injury, through the operation of this particular influence. If it be but a necessary sequence, that where the primary excitement is less extreme, the resulting disorder will be less manifest, still the difference is merely one of degree. The drunken woman, that incarnation of repulsiveness, becomes also deranged, more frequently imbecile,

<sup>1</sup> Holst, in *Ramaer*, op. citat. p. 18.

shattered in nerves, and broken in constitution; and perishes ultimately through some form or other of that ignominious decay, which, regard it as one will, follows the excess everywhere with the rigour and the certainty of fate. Blanche<sup>1</sup> narrates the case of a female drunkard who was harassed by the appearances of headless men, and of tigers, bears, lions, and other spectral illusions. These surrounded her by day and by night, so long as she was awake. She heard imaginary voices ask: Is her soul nailed fast within her, that we cannot get hold of it? Wearied out by these and other torments, she applied to the authorities, who transferred her to an asylum. In 1850, of 41 lunatics, from the direct effects of drunkenness, received into asylums in Holland, 36 were men and 5 women;<sup>2</sup> in Glasgow Asylum, in 1841, the proportions received were 22 men and 8 women; in Edinburgh, in 1853, 19 men and 6 women. But woman is often also a passive victim. The drunkenness of a husband brings ruin and distress upon her and her household, and the heart quails and the brain staggers under the ceaseless and immitigable trial of her dearest affections. As an example of this, we have the authority of Ramaer for stating, that not a year passes in which he does not receive, into the asylum under his superintendence, inmates of this unhappy description; of whose sufferings, before they gave up the struggle, and yielded themselves a prey to the dark shadows that bereaved them of the free use of the noblest of their faculties, the imagination fails to form a picture.<sup>3</sup>

In one form of the maniacal excitement of the drunk-

<sup>1</sup> *Annales médico-psychologiques*, 1846, p. 466.

<sup>2</sup> Dr C. G. Grähe, *Sv. Ldk. Sälls. Nya Handlingar*, Stockholm, 1854, p. 196.

<sup>3</sup> *Op. citat.*, p. 95.

ard, his fury proceeds so far as to give origin, occasionally, to an insane impulse to commit the most inhuman murders; and there is no tie of blood or relationship so sacred, as to have at all times escaped the consequences of this self-induced frenzy. Our own criminal records abound in instances where the wife, or the child, or the father, have thus become the wretched victims of the more wretched perpetrator; who wakens from his terrible dream to the consciousness, that he has fatally separated all bonds between himself and his family, and cast himself out for ever, as an alien, from the privileges of those laws, and that system of society, which he has so fearfully outraged. It is scarcely necessary to remark, that even the casual drinker is not always exempt from this description of excitement, in which reason loses all influence, and a man becomes perverted into the fiercest of monsters. Such a one feels himself, says Huydecoper, buoyant in frame and in spirit; he dares and ventures everything; each passion is aroused into twofold strength; he brooks no offence; the slightest word provokes and fires him to resentment; he heeds no one, is deaf to advice and persuasion, bursts into rage, seizes the readiest weapon, cannot control his emotions, is furious and savage, strikes or stabs with double violence—and first then, when the offender lies at his feet, weltering in his blood, he pauses satisfied.<sup>1</sup>

This kind of savagery sometimes passes to an extent which almost exceeds belief. On the 15th September 1835, two men of the coast-guard, Lecerf and Dauvin, on

<sup>1</sup> *Een Woord van Ernst en Liefde*: Amsterdam, 1853, p. 70.

duty near Coutance, had drink brought to them by a boy ; and, becoming intoxicated, they proceeded from words to blows of the fist. At last, they resorted to their bayonets ; and such was their fury and obstinacy, that their struggle lasted for three hours, and ended by the death of Dauvin, while Lecerf was found to have received nearly sixty wounds.<sup>1</sup> A hawker had a quarrel in a tavern with his wife, who reproached him with his gross addictedness to drinking : upon this, he seized his infant by the legs, swung it round, and dashed out its brains on the counter. Repentance followed instantly upon the crime. He took up the corpse, clasped it to his breast, and cried out in despair : " Poor dear child, and I have done this!"<sup>2</sup> I recollect, fortunately a milder, yet still an inexpressibly painful instance of this drunken ferocity, in the case of a father, who habitually, on returning home intoxicated, beat his hungry children for crying for that food of which he had deprived them by his lavish excesses at the ale-house.

Sometimes the impulse is more purely insane, and the wretched being feels himself urged on to some dreadful catastrophe, by a notion of necessity which he is powerless to resist : it may be, that it is a fancied supernatural agency which commands the sacrifice, and directs the method for its accomplishment. Another singular form of drunken frenzy, is that which incites to the crime of fire-raising. Gall saw a woman in the prison of Bamberg, who, whenever she became intoxicated, was seized with the desire of setting fire to some dwelling. Scarcely

<sup>1</sup> Labourt, *Recherches sur l'Intempérance*, (2d Ed.) p. 84.

<sup>2</sup> Ramaer, *op. citat.* p. 84.

had this insane fancy subsided with the cause by which it had been created, when she was overcome with horror at her conduct: yet she was known to have committed fourteen different acts of incendiarism, before she was placed in confinement.

Whether or not the confirmed drunkard have been affected with those more violent forms of mental derangement, to which we have directed attention, there is at least one description of disorder of the mind which it is rarely his fortune to escape. Either primarily, and by slow and scarcely perceptible degrees, or secondarily, and after the subsidence of the more acute paroxysms of madness, or perhaps after repeated attacks of convulsions, he passes into a state of incomprehension, or mental stupidity. There is now little excitement, or what is displayed is rather a state of unstable and peevish irritability, than of positive violence; as if, conscious of weakness, he grew accustomed to bluster with an affectation of authority, like a bully who uses threats to disguise his cowardice. His perceptions of external objects become more and more blunted; his memory fails; the power of reflection is diminished; and, as a necessary consequence, his ideas are obscure and incoherent, and his reasoning faculty all but extinguished. With the attention incapable of being steadily directed towards any topic, there is a growing indifference towards everything that surrounds him, and he is as regardless of his duties as he is unfit to perform them. The stupidity which has thus arisen may proceed to the extreme of hopeless imbecility. The features lose their expression, the person is neglected, and the habits become disgusting. Silent and apathetic,

his state no longer a penalty to himself, for he has ceased to feel, but all the more a warning towards others, unconscious of a responsibility which he has not escaped, his frame trembling with palsy, his reason an utter wreck, and only his grosser appetites remaining, it is thus he has defaced with his own hand the image of his Maker, and the brand of his debasement is everywhere upon him. Closely analogous to this condition, is that which has been termed the progressive palsy of the insane, and which nearly all recent observers have united in attributing chiefly to the vice of drunkenness. It has been well remarked by Baillarger, that the continual stupor, the feebleness of the limbs, and the hesitating and imperfect speech, of this hopeless condition of disease, represent singularly the aspect of a perpetuation of the ordinary signs of intoxication.

It has even been considered, that the habit of excessive drinking leads, in many instances, to the propagation of an idiotical progeny, and numerous facts have been adduced which appear to give weight to such an opinion. Thus, it has been attempted to explain the increase of the number of Cretins, in certain parts of Switzerland, by the increased consumption of ardent spirits; and Dr Howe alleges that, of 300 idiots in the state of Massachusetts, whose history he investigated, the immense proportion of 145 were the offspring of intemperate parents. Winslow in our own day, and Langius, Behrens, Riedlin, Beverwyk, and others, as cited by Joseph Frank,<sup>1</sup> and by Ploucquet,<sup>2</sup> at periods more remote, have expressed

<sup>1</sup> *Praxeos medicae universae praecepta*; p. II., vol. I., s. I., c. xxiv., sec. c.

<sup>2</sup> *Literatura medica digesta*, t. II. p. 1.

a similar conviction. It may fairly become, then, a matter of congratulation, from this, as from other considerations, that it has been proved by the investigations of Lippich<sup>1</sup> and others, that the produce of the marriage of drunken parents is usually smaller in number than that from a more happy union. As for the extreme drunkard, whose career is well nigh concluded, it is still more fortunate, that he who was all but certain to transmit to his descendants an imbecile mind, in a weak and mis-shapen body, or who could only poison by his example, and drag down by his misery, has ceased from every probability of standing in the sacred position of a father.

Certain writers on the diseases of the mind have admitted a form of insanity which they have termed dipsomania, and by which they desire to designate that impulse towards the abuse of intoxicating liquors, which is known to arise suddenly in individuals at periods remote from each other, in contradistinction to that craving which is established gradually through the influence of habit, and which endures with more unbroken regularity. Ordinary drunkenness may be regarded, as at first a vice, and afterwards a malady; but the impulse referred to has been held to be a malady from its commencement, and the vice stands to it in the relation of effect, and not of cause. The common drinker, upon whatever pretence of inducement he may have proceeded, has deliberately cultivated his propensity until it has mastered him, and his insuperable longings were originally the growth of that will which they now hold in subjection; but the other, from a state of complete sobriety, is hurried at once

<sup>1</sup> *Grundzüge der Dipsobiostatik*, p. 59.

into excess, in his own despite, and with a consciousness of degradation before him which he is impelled to meet. This is certainly a rare condition of disease ; but it is one the possible existence of which it seems necessary to recognise ; as a portion, at least, of the cases reported by Esquirol,<sup>1</sup> Huss,<sup>2</sup> Most,<sup>3</sup> and others, and the similar cases which most men of experience cannot have failed to have witnessed, scarcely permit us to question its reality.

The exciting cause of this affection may be either some physical uneasiness, or some condition of mental depression ; and those who have been liable to epilepsy, or other nervous disorders, seem to be especially predisposed to it. It may thus be connected with temperament and constitution, and has appeared to be hereditary. After an interval of indescribable irritation and anxiety, the paroxysm bursts forth with irresistible violence, and the intoxicating fluids are gulped down with eagerness, till insensibility ensues. No obstacle is permitted to interfere with the insane impulse of the sufferer, and no shame deters him. If the liquor be withheld, he becomes frantic with desperation, and will rush anywhere, threaten, beg, or steal to obtain it. The possession of it seems to soothe him instantly ; and the debauch is continued, and renewed as its effects wear off, for a period which may endure for days, or even for weeks or months. At length, the extreme disorder of the constitution which follows subdues the passion. He becomes nauseated ; turns with abhorrence from his potations ; vomits frequently a quantity

<sup>1</sup> *Des maladies mentales*, t. II. p. 75.

<sup>2</sup> *Chronisk Alkoholsjukdom : Andra afdelningen*, p. 50.

<sup>3</sup> *Encyklop. der ges. med. and Chir. Praxis*, b. I. p. 554.

of the slimy or watery fluid which we have previously characterized; occasionally perspires profusely; and the paroxysm, viewed in the most favourable of its aspects, has reached its termination.

For some time afterwards, he usually remains weak and dispirited; confesses his fault with tears of contrition; and makes promises and vows of amendment. But, sooner or later, the period approaches, when the memory of his past suffering is insufficient to outweigh the renewal of a present temptation. He may struggle for a while against the recurring propensity, may entreat some means to be employed by those around him to prevent him from falling into the attack, and may even present himself at the gates of an asylum, to seek for protection under the restraint of its rules. But his course is more frequently to yield to the ruinous impulse; and promises, resolutions, shame, danger, suffering, personal interest, the adjurations of friends, and the misery of his family, are again but trifles in his path which he desperately overleaps.

In the gloomiest of lunatic asylums, the old Irrenthurm of Vienna, a man, a house proprietor in good circumstances, was pointed out to me, in whom this craving was so excessive, that he could only be protected from it by keeping him almost constantly under the restraint of the institution: truly a mercilessly strong propensity, which a single residence, however short, in those sunless courts and vaulted corridors, thronged with incurable maniacs, was not sufficient to banish for ever! Ramaer knew an individual, who found his way over roofs, leapt from a window eighteen feet high, clambered along spouts,

and waded through a deep stream, to reach a tavern, where he gulped down twenty or thirty glasses of gin in quick succession: "Still more, still more!" he cried, unsatisfied with either the quantity or the strength of what he had swallowed. Instances of a nearly similar description have occurred within my own immediate observation.

At first, such paroxysms may recur only once or twice a-year, or even seldom; but their tendency is to shorten their intervals, until it becomes at last impossible to trace any line of distinction between a case of this description, and that of the ordinary drunkard. Indeed, many of the examples of insane impulse, which are cited by authors, seem to have little real claim to be included under this category; and it is plainly necessary to restrict this description of definition somewhat closely, otherwise every notable yielding to the sway of the passions might pass equally under the plea of insanity. Neither is it always easy to free even extreme examples from a full responsibility; the more especially, as the disease is unknown in those who have not been previously liable to, at least, casual intoxication. The very direction of the impulse proves that the effects of inebriety have already been experienced, and that the nature of the result sought for has been revealed through a former familiarity with the agent by which it can be produced. Perhaps, the most prudent course would be to admit only the reality of those instances, in which the reason appears otherwise in some degree impaired, and where there is an original want of entireness in its operations, although it may not be possible to point out any specific defect, the

existence of which would at once establish a criterion. In such individuals, we find frequently considerable talent and acuteness; but there may be detected, beneath the surface, a degree of capriciousness and instability, which prevents them from using their faculties with that perseverance which adheres to a forward course, and secures them from recoiling upon themselves. There is here, in short, if not actual insanity, at least a predisposition to insanity, which awaits only a concurrence of circumstances to foster it into existence.

There is another topic, which might have been included with propriety under the head of the mental diseases caused by habits of intemperance, but which appears to me of sufficient importance to merit a distinct consideration. It is that of suicide.

## CHAPTER VIII.

### SUICIDE.

If we pause for a while to review the details which have been successively developed in the preceding chapters, and if we endeavour to bring our mind to grasp them in their entireness, and can thus recognize their positive truth, and the appalling nature of that truth, what other resource have we, even were there nothing beyond all these, than at once to arraign the drunkard before society and religion as a deliberate self-murderer? Conscious of the dangerous tendencies of the vice to which he was suffering himself to become addicted, yet offering no serious resistance to its growth, by a thousand separate acts he has broken up the foundations of his health; and, while he feels the decay which already oppresses him, and foresees the approaching ruin, his efforts are not to prevent but to ensure the destruction, or, if he proceed to will otherwise, it is without force and without perseverance. It was not wanting, to complete the conception of an act of suicide, that he should terminate his life by a single blow, or concentrate into one draught the poison which he has preferred to distribute into an indefinite number of portions. To know the tendency of his acts, was to involve him in their full respon-

sibility; and the pertinacity with which they were repeated was only, under such circumstances, an aggravation of their guilt.

But it would be comparatively well, if the accountability of the drunkard could be always restricted to the view of the crime of suicide, which a just sense of his conduct thus constrains us to adopt. Unfortunately, however, that more direct and immediate self-destruction, to which the name of suicide is usually attached, is also, in a large proportion of instances, the unhappy termination of his career. He may at first refuse to admit to others the destructive tendency of his ordinary habits, but, long before the close, the warning of sinking nature has impressed upon himself the conviction of the fate which they have prepared for him; and thus, should he lift his hand against his life, armed with an instrument more promptly fatal, it is by a kind of double suicide that the last act is perpetrated. The more gradual self-destruction, which simulates disease, is crowned by the rapid catastrophe which kills by violence. It is the character of the act which is changed, but not its essence: yet how painfully this change increases the shock inflicted upon humanity, is too obvious to require comment.

There are two forms under which the tendency to suicide exhibits itself in the confirmed drunkard, and it is of considerable practical importance that these should be distinguished. In the one form, the act assumes the appearance of cool deliberation; has frequently been long contemplated, and is approached with every precaution to prevent detection, and to secure its completion. Oppressed by the manifold evils with which he has sur-

rounded himself, probably embittered against his family whom he has dragged down into demoralization, suffering in mind and in body, and stung by remorse, the miseries of the drunkard appear to him irremediable, and have grown more formidable to him than death. He may know that he ought to fear to die from the tenour of his life, but he is unwilling to live from the pain of living : and with that reason overpowered which might have summoned up his better principles, or that self-possession lost which might have enforced them, he has no guardian to interpose between himself and his destruction. It is not a mere irksomeness of existence which chiefly distresses him, although his incapacity for protracted thought, or continuous bodily exertion, has necessarily unfitted him for his usual occupations, has made all within him a void in his sober moments, and has vexed him from his feeling of helplessness. It is something more active than this by which he is influenced, and it would be more strictly just to say of him that he hates his life than that he is weary of it. His pleasures were corrupt, or at the best frivolous, and they have deluded and abandoned him. Discontented with himself, and at feud with everything around him, he stands isolated from the world, with no soothing memories to rest upon, and with a future more threatening than the past. Everything reproaches him. His bodily pains, his waning vigour, his mental chagrin, his feelings of shame and repentance yet his inaptitude for reform, his failure not only in his duties towards society but his habitual outrage of its purest principles, perhaps his loss of fortune, and the ruin of his family, are all sources of perpetual agony, and he has besides

systematically deprived himself of the best sources of consolation. It is in this condition that the drunkard, sinking deeper and deeper into despondency, begins to contemplate the possibility of terminating his evils, in at least as far as this world is concerned, at a single stroke ; and, brooding incessantly over his purpose, and carefully maturing its design, at last, in some moment of more than ordinary desperation, or during the shame and depression consequent on some more than ordinary excess, the fatal blow is struck, and the victim has passed for ever from the judgment of his fellow-men.

It may be asserted, that the act which terminates existence is here no farther insane than those acts which have led to it. To the man of sound intellect and guarded morals, it would be strange to say that it could appear reasonable ; but there is much in all human conduct which cannot be reconciled with pure reason, and the whole career of the drunkard, alternately either idle, dissolute, mad, or stupified, is diametrically opposed to it. To judge of the sanity of his motives, we must imagine ourselves in his position : and if that be one in which there seems to be no hope in this world, and if the tenour of life have shewn that there has been no guidance from those sacred influences which might direct to another, it is but the legitimate conclusion which must be drawn, from such reasons as can be brought to bear on a condition so irrational, that the termination of existence is an event to be desired ; and that he who has so lived, as by a continuous series of acts to destroy his happiness in this world, and to blunt his sense of awe with reference to the next, is impelled by no delusion, and can be justified

by no plea of derangement, but has, alas ! all the conviction which his situation admits to justify him in his resolve. Thus the drunken suicide is an abject suicide, whose faith and hope have been shattered by a miserable sensualism. The enjoyment of the moment he has purchased with drafts upon the future, to be paid at last with a terrible usury, by one whose sunken spirit does not retain one strenuous thought to sustain and guide him. It is indeed a merciless exaction to which he has bound himself : "health, strength, welfare, honour, fortune, and, at last, life itself, when nothing else remains."

Under the second form, in which the drunkard manifests a tendency to suicide, the act itself is without pre-meditation, in the strict sense of the term, and is a direct consequence of those more violent states of disorder of the intellect, for which he is no farther responsible than that they are the result of his excesses. In attacks of delirium tremens, his delusions are sometimes of so painful a nature, and the phantasms which surround him so full of horrors, that he rushes to avoid them with a panic terror which gives no scope for hesitation ; and a leap from an upper window, or a hurried flight and a plunge into a neighbouring river, or some other method of destruction, seems the readiest resource to him in his bewildering agony. But even during the fit of drunkenness itself, and without the presence of any other delirium than that directly attendant upon the intoxication, there appears occasionally, in certain individuals, a remarkable disposition to commit self-murder. Esquirol mentions the case of two sisters, one of whom drowned herself after an orgy, and the other had thrown herself twice into the

Seine, while in a state of intoxication, and was about to precipitate herself a third time, when she was prevented and led to an asylum. In another instance, a female, thirty years of age, was in the habit of having recourse to wine on every occasion of chagrin, and when drunk; made repeated efforts at self-destruction. Another, whenever she became intoxicated, made attempts to hang or strangle herself. When under restraint, and unable to gratify her passion for liquors, she was not only perfectly sane,<sup>1</sup> but did not evince the slightest tendency to suicide. On being questioned as to her motives, she answered vaguely that she could not tell, that she did not know what she was doing. The same eminent physician quotes also, on the authority of M. Dannecy, the case of a shoemaker, who had the same craving for intoxicating liquors, and the same impulse to destroy himself while under their influence.<sup>2</sup> It appears that this disposition is especially apt to evince itself in individuals who, at a former period of their lives, have suffered from severe injuries of the head,<sup>3</sup> or from violent attacks of fever, or acute inflammatory disorders affecting the brain or its membranes. An ill-timed reproof, or a threat, levelled against the drunkard while in a state of excitement, has induced him to perpetrate instant suicide ; and the sudden detection of a long career of excess, assiduously disguised under the mask of indisposition, has been known to lead to an attempt of a similar description. Where actual mental derangement has been produced, and confirmed, by habits of intoxication, the more violent occasional paroxysms

<sup>1</sup> *Maladies Mentales*, t. I. p. 592.

<sup>2</sup> Copland, *Medical Dictionary*, vol. II. p. 555.

are frequently attended by delusions, which also impel the maniac to this form of what may be termed unpremeditated self-murder.

All writers, who have investigated the subject of suicide, concur in asserting its close connexion with the vice of intemperance. Ramaer, the able author of the treatise on drunkenness considered in its relations to mental derangement, to which we have already made repeated reference, assigns to it, among all other causes, the foremost place in inducing the act.<sup>1</sup> Mr Farr, in his analytical survey of the registration reports in England for 1839, states that intemperance and suicide, as well as other forms of violent death, are found associated in the registers; and that the professions peculiarly addicted to drunkenness have more than the due proportion of suicides. "Drunkenness," he adds, "leads to this; but drunkenness is a sort of indirect suicide, and both are tendencies of the mind, indulged often from the same motives, and promoted by similar causes; for in drunkenness the wretched find not only the gratification of an appetite, but the suspension of natural consciousness—in death they seek its cessation."<sup>2</sup> We have a fact of singular significance under this head, conveyed in the able statistical reports of the British Army, compiled by Major Tulloch. It appears that, out of 686 deaths among the Dragoon Guards and Dragoons, no less than 35, or upwards of one in 20 of the whole, have been caused by suicide, independent of the many attempts which did not prove fatal; and he contrasts this with the proportion

<sup>1</sup> *Op. citat.* p. 70.

<sup>2</sup> *Third Annual Report of Registrar-General*, p. 81.

among individuals insured in the Equitable Insurance office, which has been found to be only one in 110 of the total deaths. Even the latter appears to be a lamentably high proportion; but he accounts for the greater frequency among the dragoons by pointing to the circumstance, that these corps contain more of a class who have reduced themselves by their dissipation and extravagance; a remark the appositeness of which has been personally confirmed to me by a competent authority. In the more recent report, published in 1853, this statement is attempted to be qualified; yet no farther than to withdraw the experience of the Insurance office, as affording no proper standard of comparison. It is easy to imagine motives, why such a statement should not be desired to be made without considerable reserve; but if the main facts be true, they must be met otherwise than by ignoring them. In an analysis of 357 deaths of drunkards, by Mr Neison, one in 25 were suicides, or were "found drowned."<sup>1</sup> Professor Huss<sup>2</sup> states that, in Sweden, in the five years from 1841 to 1845, every 57th man, who died between the ages of 25 and 50, was a suicide; and he estimates that nearly the whole of these suicides were the result of intemperance. Strikingly confirmatory of this, Dr Kalen reports,<sup>3</sup> that of nine cases of suicide, brought into one of the principal hospitals in Stockholm, in 1851, seven had perpetrated the act under the influence of the drunkard's delirium.

Proofs of this description might be multiplied a hun-

<sup>1</sup> *Journal of Statistical Society*, vol. xiv. p. 211.

<sup>2</sup> *Om Sceriges Endemiska Sjukdomar*, Stockholm, 1852, p. 122.

<sup>3</sup> *Hygiea*, Stockholm, 1852, p. 270.

dred-fold. An eminent foreign authority, already cited, Dr J. L. Casper, bears ample testimony to the like frequent association of drunkenness and self-murder.<sup>1</sup> This vice, which he stigmatizes as the moral pest of our age, he describes as threatening, in every station of society, to destroy more and more both the mental and physical energies of the people; and he charges it with being the principal cause of the increase of suicides in Berlin, the city in which he is resident. In a subsequent portion of his treatise, which is everywhere as replete with humanity as with sound judgment, he informs us, that in a fourth-part of all the instances of self-destruction, which have come under the cognizance of the police during the years from 1812 to 1821, and in which the incitement to the act could be ascertained, that incitement was found to be the habit of intoxication: and he justly directs our attention farther to the remark, that, while in a large proportion of cases of suicide the motive remains uncertain or unknown, we may with some probability attribute many of these also to intemperance; and that, at all events, not a few of the other causes reported, as mental derangement, debt, starvation, and domestic dispeace, may assuredly, for the most part, be charged against this vice. As a fact in entire accordance with this, he displays the wide opportunities presented for excess, by stating that in Berlin every fourth house contains a spirit-shop, and that there is thus one for every 130 persons, reckoning the whole population of whatever age or station.

<sup>1</sup> *Beiträge zur med. Statistik und Staatsärzneikunde: I. Ueber den Selbstmord und seine Zunahme in unserer Zeit*, p. 61.

Dr Copland<sup>1</sup> cites a table, presenting an abstract of the assigned causes of the suicides committed in London, between the years 1770 and 1830, from which it appears that the proportion produced by drunkenness and misconduct was one in 10, setting aside those cases in which the causes were unknown. But we must remember, that only the more flagrant examples of drunkenness would be remarked and recorded; and that here too the poverty, domestic grief, reverses of fortune, dishonour and calumny, and remorse, which occupy positions so conspicuous in the table, might many of them have an intimate connection with previous habits of excess. Beyond this, when we keep in view that all instances of attempts at suicide, which have not been completed, remain unrecorded, and that these, perhaps, greatly exceed in number the actual perpetrations; that at least a half of those entered as "found drowned" are cases of self-destruction, while not a few are never found, or if found, are never claimed or recognised; and that a similar proportion of all these must be the results of intemperance; we have a picture before us of the effects of the vice, which, even if it stood apart from all other considerations, must appear as detestable as it is intensely melancholy.

It is in harmony with what has been already stated with reference to the effects of intemperance on females, that the proportion of those who commit suicide is much smaller than that of males. Esquirol,<sup>2</sup> from considerations founded on the examination of a variety of sources, estimates that the ratio is as one of the former to three

<sup>1</sup> *Medical Dictionary*, vol. ii. p. 560.

<sup>2</sup> *Op. citat.* t. i. p. 585.

of the latter ; while Casper<sup>1</sup> seems inclined to rate the proportion as high as a half in Paris, and at only one in five in Berlin. Of 1003 cases of suicide, brought to the Morgue at Paris, in the years between 1836 and 1846, the causes of which could be ascertained, 84 were found to be owing to drunkenness, and of these 67 were men, and 17 women.<sup>2</sup> It is also a consistent fact, for which we are indebted to the Berlin statistician, that while the Jews, as a race, are remarkable for their sobriety, they are also favourably distinguished for the extreme rarity of cases of suicide among them.

There is no species of destruction to which the drunkard does not resort, in his frenzy or his despair, to effect his fatal purpose. An advocate at Paris, in despondency at the excesses into which he was carried by his habits of intemperance, opened the veins of both arms, and died. A similar case came under my observation, where a female, of between forty and fifty years of age, addicted to the abuse of intoxicating liquors, shut herself up in her apartment, and terminated her existence by means of numerous wounds in the veins of both arms, which she had managed to inflict with a pair of blunt scissors. Equally within my own experience, the cord, the river, the knife or razor, the pistol, and poison, have all been employed by the drunkard as means of self-destruction ; and by some individuals the attempt was twice or thrice repeated before it was finally successful. In a few, I have known the attempt to be made, and the idea apparently entirely abandoned after a first failure.

<sup>1</sup> *Op. citat.* p. 51.

<sup>2</sup> *Annales de Hygiène publique*, t. xiv. p. 207.

We have now followed the confirmed drinker from the moment in which he first lifted the cup in cheerful confidence to his lips, to that in which it has fallen from his hand, that he may finally sink prostrated by its poison ; or to that even worse condition, in which the draught has fired his mind into permanent madness, or subdued it into fatuity ; or to that most fearful emergency of all, in which he has dashed it aside that he may grasp an instrument more directly fatal. It may be that the low and rude in intellect, and the gross and sensual in general propensities, have been the easiest victims ; but we know that, such is human infatuation and weakness, the fascination has also but too frequently involved worth, gentleness, beauty, genius and learning, in the abject ruin : with the effect, however, of so transmuting these qualities, that it becomes no longer possible to recognise them. Entering with its bane, more or less nearly, into almost every family circle, and spreading a canker from which tenderness would willingly turn its observation, and which sympathy would hide if it could be hidden, his would be a sad and an unsparing task who could reveal the full extent of its workings ; because the burning words of a truth so open would leave few hearts unseared.

“ Happily,” says Tissot—and the words fall painfully from one whom it would be unjust to accuse of inhumanity—“ happily society loses nothing when it loses these individuals who dishonour it, and whose brutalized spirits have, in one sense, been dead for long before their bodies.”<sup>1</sup> Not less grave are the expressions of the venerable

<sup>1</sup> *Avise au peuple sur sa santé*, p. 88.

Hufeland :—“ Neither for honour nor for shame, neither for the great, the beautiful, nor the good, has such a being any sense, but merely and alone—for brandy. I know nothing which can so produce the character of imbecile brutality in man, and thus effect his degradation, as the protracted and intemperate use of ardent spirits. Other vices admit the hope of amendment, but this performs its work of destruction thoroughly, and without the prospect of remedy ; for it extinguishes in the system all susceptibility for remedy.”<sup>1</sup> Words like these touch like the tones of a dirge.

And to pass for an instant from the warnings of the physician, and quote our own moralists, not less strong, if somewhat less solemn, is the testimony of the philosophic Paley :—“ There is a difference, no doubt, between convivial intemperance, and that solitary sottishness which waits neither for company nor invitation. But the one, I am afraid, commonly ends in the other; and this last is the basest degradation to which the faculties and dignity of human nature can be reduced.”<sup>2</sup> And hear the utterance to which the subject provokes the wise and gentle Addison :—“ However highly this tribe of people may think of themselves, a drunken man is a greater monster than any that is to be found among all the creatures which God has made.”<sup>3</sup> Can we believe that, in his later years, Addison was himself a victim ?

<sup>1</sup> *Makrobiotik* (6te Auflage), p. 248.

<sup>2</sup> *Moral and Pol. Philosophy*, b. iv. c. ii.

<sup>3</sup> *Spectator*, No. 569.

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## CHAPTER IX.

### PHYSIOLOGICAL PATHOLOGY.

THE numerous and complicated disordered actions, which appear as the result of a habitual abuse of intoxicating liquors, must naturally be expected to leave in the system some traces of their operation, which may be detected by an examination of the organs after death. The structural, or organic changes, which have been thus originated, may be regarded in two different aspects : firstly, as affording direct evidence of that depraved nutrition which has been described as the primary effect of the habitual excess ; and, secondly, as in themselves the sources, or the concomitants, of a new and consequential class of phenomena, which follow and complicate the direct effects of the alcoholic stimulants, betray the changed, and progressively changing, conditions, and perverted functions of the different portions of the organism, and present the principal tokens of its approaching dissolution. Thus the changes discovered on dissection afford not only the clearest proof of the deleterious nature of the fluids which have been imbibed, but they exhibit to us also an exposition of the manner in which the poison has operated, and illustrate the origin and the symptoms of those accessory disorders which have sprung from it, and with which its action has been associated.

The prevailing appearances on dissection, in cases of

death ensuing quickly after a single extraordinary excess, are generally not so much an alteration in the condition of the stomach, as a state of congestion, or accumulation of blood within the brain and its membranes, along with an effusion of watery fluid ; and there is usually congestion also of the minute vessels of the lungs. Although the leading features seem, at a first glance, to be nearly allied to those of apoplexy, yet, in considering them more closely, it will be found that, in the large majority of instances, the cause of death depends rather upon a modification of what is usually termed asphyxia ; or upon that condition of the lungs in which, from whatever cause, the blood is prevented from undergoing those changes, through the contact of the atmosphere, which are necessary, at each completion of its circuit, for the maintenance of its vitality.

The mechanism of the deleterious process, as illustrated by the symptoms during life, and by the appearances after death, may be described as follows. In the first instance, the action of the heart, urged into preternatural energy by the excitement of the alcohol, propels to the brain a greater abundance of blood than its vessels are enabled to transmit with sufficient readiness : hence an accumulation within the head, leading to pressure and to obstruction of functions, and supervening with such rapidity, that the preliminary stage of excitation can scarcely be said to exist, or is of brief duration, and that of stupor is promptly established. To account for this, occasionally all but instantaneous, production of the condition of insensibility, it is not necessary to imagine any direct effect of the alcohol upon

the nerves of the stomach, and by them transmitted to the brain : on the contrary, the reasons for questioning the plausibility of such a supposition are weighty and numerous. Yet in cases where a large draught of alcoholic fluid has been taken at once, bathing in an instant the whole extensive inner surface of the stomach, corrugating its tissues, and causing an intense scalding sensation, we cannot doubt the existence of a severe shock to the general system, like that which occurs in extensive scalds of the surface of the body, but more vehement and dangerous, in proportion to the delicacy and importance of the parts involved ; and this independent of any less direct effects produced by the absorption of the alcohol. Still, in the absorption of the alcohol itself into the veins, and its consequent presence in the blood, and, through the blood, within the brain, as proved by the experiments of Percy and others, and recently with great distinctness by Professor Buchheim,<sup>1</sup> we have doubtless the most powerful agent in completing the oppression of the nervous force ; and the time requisite for transmission and absorption in this way has been ascertained to be exceedingly limited. According to the experiments of Mr Blake, it appears that certain poisons may be diffused through the circulation in so short a period as nine seconds ; and, even if we accept the longer period of from half a minute to two minutes, as estimated by Müller, we have still a rapidity more than sufficient to account for the most sudden examples of alcoholic poisoning.

<sup>1</sup> Ueber die Nachweisung des Alkohols bei gerichtlichen Untersuchungen :—Deutsche Zeitsch. für die Staatsärztekunde, 1854, b. iii. pp. 381-395.

The extreme oppression of the brain, and, by contiguity of position and analogy of function, of the vitally important upper portion of the spinal marrow, thus induced by an agency which is at once precipitate, powerful and extensive, leads here to something beyond that temporary paralysis of the muscles of animal life, which is the ordinary effect of intoxication. Those concerned in the movements essential to organic life, and less dependent upon our will, are now also implicated, and the motions of the chest, in the act of respiration, become feeble and irregular. Hence the deficient propulsion of the blood through the lungs, its congestion in their substance, and, as a necessary consequence, its defective aeration. A blood possessing the qualities of that in the veins, and bereft therefore of a portion of its vital properties, necessarily passes into the arteries, and is diffused throughout the system, evincing itself by an appearance of lividity where it flows near the surface. The work of death has now commenced. The animal heat is generated in less abundance; the torpor of the brain is increased by a new source of oppression; the nervous energy is still farther diminished, and fails even to sustain the motions of the heart; till finally the circle of vital action is reduced to its narrowest limit, and this organ, the latest in dying, having received in quick succession the perverted blood into its proper arteries and its own substance, ceases to be able to discharge the remnant of its functions, and dilates after its last throb.

There is no appearance, on examination after death, more common in the confirmed drunkard, who perishes after a long continuance of his habit, than a state of chronic inflammation of the lining membrane of the stomach. In

this condition the walls of the organ are sometimes considerably thickened, are covered in their interior with a net-work of vessels closely injected with blood, and may present more or less extensive traces of ulceration. Sometimes the disorder in the local circulation has proceeded only as far as a state of congestion, in which the vessels are simply distended with a more than ordinary quantity of blood, without any farther disorganization or alteration of structure, and unaccompanied by ulceration ; and, as this condition is a frequent concomitant of disease of the liver, its existence in the drunkard may, on this account also, be naturally anticipated. It is self-evident, that even a state of congestion of the vessels of an organ so delicate, and so important as the stomach, must be attended with great disturbance of its functions, and with an altered condition of its sensibility ; and that we have in this state, as well as in that of the more advanced mischief of inflammation, an explanation of that irritability, and incapacity for retaining food, which is so usual a result of habitual excess. The thickening of the coats of the stomach, as the product of continuous excitement, may proceed to such an extent as to interrupt the passage of the food, through mechanical impediment. Sometimes the organ shrinks remarkably in size.<sup>1</sup>

In a confirmed drunkard, who perished at the age of fifty years with symptoms of cancer of the stomach, its lower orifice was found contracted by a number of coherent, moderately soft tumours, the size of pigeon's eggs.<sup>2</sup> The alteration here appeared to be merely an increase of

<sup>1</sup> Hyrtl, *Handbuch der Topog. Anatomie*, 1853, b. I. p. 421.

<sup>2</sup> Gluge, *Atlas der path. Anatomie: Die Hypertrophien*, p. 34.

the natural elements of the organ, and not a deposit of heterogeneous matter ; but similar cases have undoubtedly been occasionally mistaken for actual cancer, and it is certainly possible that the tendencies to this formidable disease may be promoted by habits of intemperance. In another case, Gluge found the mucous membrane of the stomach softened, an occasional circumstance which had been pointed out long previously by John Hunter ; and, in death after the drunkard's delirium, Andral also has found extensive softening of the mucous lining. It may even become gangrenous ; though examples of this description are exceedingly rare. Dr Christison quotes the case of a young man at Paris, who had been drinking brandy immoderately for several successive days ; when at length he was attacked with shivering, nausea, feverishness, pain in the stomach, vomiting of everything he swallowed except cold water, thirst, and at last hiccup, delirium, jaundice and convulsions ; and death took place on the ninth day. On examining the body, the stomach was found mortified over the whole mucous coat, the large intestines were much inflamed, and all the small intestines injected with blood.<sup>1</sup> A state of chronic inflammation of the large and small intestines is also a common effect of intemperance, and assists in explaining to us the abolished nutrition, and the tendency to diarrhoea which characterise the later stages.

The earliest effect of intemperate habits upon the liver is usually to produce a condition of congestion, in which it may either present a generally red or a somewhat mottled

<sup>1</sup> *On Poisons*, p. 257.

aspect. Under the persistence of its exciting causes, this congestion generally passes into a state of chronic inflammation, slowly and insidiously establishing itself, and effecting, during its gradual development and progress, a series of permanent changes in the functions of the organ. Independent of the more obvious office of secreting the bile, there are grounds for believing that the liver effects some change in the constitution of the blood, supplementary to that which takes place in the lungs through contact with the atmosphere. The portion of the blood which is conducted to the liver, by the large venous trunk which conveys it from the intestines, has been found by physiological chemists to contain naturally more fat and blood globules than that of the other veins. This fat appears partly to pass away with the bile, commuted into the substance termed cholesterine, and partly seems to be decomposed through the agency of the liver; so that, when the blood is afterwards conducted towards the heart by the great venous conduits, it is found that the fat-globules are diminished in quantity. Human fat has been ascertained by Chevreul to contain the large proportion of 79 per cent. of carbon: it is, therefore, but a conversion of terms to say, that the blood which abounds in fat abounds in carbon. Should, then, any circumstance interpose, by which either the blood may become loaded with a superabundance of fat, or of its principal element, or the liver be unfitted to complete the process of its conversion, we might naturally expect that an accumulation of this substance would take place within the system, and especially in that organ where its elimination was first arrested.

Now this is precisely what occurs with the drinker of ardent spirits. The alcohol which he consumes contains 53 per cent. of carbon; and this alcohol is absorbed in great part by the veins of the stomach, and upper portion of the intestinal canal, and conveyed directly to the liver. Its stimulating properties produce here that degree of congestion, or of chronic inflammation, to which we have already alluded, [and which is inconsistent with the due performance of function; and we have thus the twofold condition of an excess of carbon in the liver, with a defect of capacity to appropriate it according to the laws and the requirements of the system. Hence the tendency to an excessive deposit of fat, giving rise ultimately to what has been termed the fatty liver, or to that identical form of disorder which occurs with peculiar frequency in the drunkard; while besides this, it has been computed by Scharlau, that the quantity of carbon persistent in the blood is still 30 per cent. greater than that in the temperate and healthy. The alcohol itself, remaining partly undecomposed, and still mingled with the otherwise impure blood, passes through the liver, and reaches the general circulation.

The correctness of these views is indirectly confirmed by the consideration of other circumstances, in which the just proportion between the amount of carbon in the system, and the power of discharging it, is interrupted by disease. Thus in consumption, the quantity of carbon naturally in the blood is too considerable to be brought into fit contact with the oxygen of the atmosphere by the weakened lung, and so fails to be converted into carbonic acid, and duly ejected. The chief constituent

element, therefore, of fat is retained ; and the liver having, as we have previously hinted, an action upon the blood supplementary to that of the lung, it is deposited in the former organ. This is a very usual circumstance in pulmonary consumption, although the waxy or granular liver is also frequently met with, and it is the more remarkable, as the fatty liver, which is here usually an enlarged liver, contrasts itself so strongly with the general emaciation. In the foetus, too, of warm-blooded animals, while the action of the lung is necessarily in abeyance, the fatty liver is the proper physiological condition, from the evident operation of a similar cause to that which renders it a pathological state in the adult.<sup>1</sup>

In the bodies of eight persons who had perished from the effects of habitual intoxication, Professor Huss<sup>2</sup> found that not one had escaped an alteration in the structure of the liver. In two the affection was what is called the gin-drinker's liver, or the nutmeg-liver, terms derived, the one from the experience of its usual origin in England, the other from the mottled appearance of certain parts when exposed by section. In two it was the fatty liver; in three the granular liver; and in one the cirrhotic liver (*xιρρός, yellow*), a designation originally applied by Laennec, to denote the altered colour of the organ. We have, in this community of origin, a confirmation of the views of Gluge, who asserts that all these forms of disorder are merely modifications of one condition, which he terms generally stearosis, or fatty degeneration; and that each has alike its origin in a deposit

<sup>1</sup> Gluge, *Atlas der path. Anatomie: Die Stearose der Leber.*

<sup>2</sup> *Chronik Alkoholsgiftdom: Andra afsejning*, p. 131.

of fat in the tissue of the liver, which may either be accompanied with enlargement or with diminution of its bulk. In the nutmeg liver, this deposit of fat is accompanied by a state of congestion of the bloodvessels, and especially of the veins. The granular liver presents a more advanced form of the affection ; and here the liver is usually diminished in size, though sometimes it is enlarged. The increase in bulk occasionally proceeds to an extraordinary extent. In one case, in which it seemed to fill more than half of the entire cavity of the abdomen, I could not estimate it at less than 18 pounds; though, as it was not actually weighed, I cannot pretend to speak with accuracy. The patient was a confirmed drinker. Other writers, however, report such weights as 20, 30, or even 40 pounds, as having come under their observation.

The granular liver seems to be the description of chronic liver complaint which is most commonly observed in India, where, according to the explanation of Liebig, the Europeans, consuming a rich food, and breathing a rarefied air, and thus disordering the just relations between the carbon to be exhaled and the oxygen inspired, accumulate the former, and favour the tendency to the disease. The cirrhotic liver constitutes a still more advanced form of the degeneration ; and now the vascular substance of the liver, and with it the proper structure of the organ, has almost wholly disappeared. The liver, when in this state, is almost uniformly smaller than natural, having shrunk to a half, or even to a quarter of its former dimensions ; and it is usually studded with inequalities, from the size of a millet seed to that of a filbert. It is this form of disorder which, in the drunkard, is generally at-

tended with dropsy. All these different gradations may be seen in progress in an individual liver; yet it appears by no means necessary that the one should be constantly developed from the other. They are different forms of a generic disorder, but not mere stages in the progression of an individual affection. The existence of fatty liver in the drunkard is often accompanied with the formation of false membranes, which may extend themselves everywhere over the surface of the intestines, and are a farther evidence of the prior chronic inflammation which has existed within the abdomen. These I have seen subsisting in the drunkard in the form of strong adhesions between the diaphragm, liver, stomach, spleen, and transverse colon, and over the site of the kidneys. Dr Saunders<sup>1</sup> has observed the main ducts, proceeding from the liver and gall-bladder, so contracted and thickened in intemperate dram-drinkers, that they were impervious to the flow of the bile.

But it is also a natural result, that the altered condition of the liver, with the necessarily imperfect performance of its functions, should farther evince itself in an altered condition of the biliary fluid, which becomes usually deficient in quantity, or perverted in quality. The impurities which this secretion ought to have abstracted from the blood, and to have discharged by the proper channels, remain thus unseparated from that fluid; and the proximate elements of the bile itself are permitted to accumulate, and traverse the system in all directions, leaving everywhere the traces and the taint of their existence.

<sup>1</sup> *On the Structure and Diseases of the Liver*, p. 240.

Hence the jaundiced complexion, in part the indisposition to bodily and mental exertion, and even, in extreme cases, one form of the stupor and insensibility which are the speedy forerunners of death. As the blood in the general circulation now contains also a greater than just proportion of carbon and of fat, there is a tendency to deposit the latter elsewhere throughout the body; and hence the bloated, universal obesity of intemperance, in certain constitutions. But the disordered action of the stomach, and the perverted condition of the bile, necessitate the defective elimination of the chyle, or nutrient matter of the food; and we have here another source of faulty composition of the blood, which, while it has been made to abound in imperfectly vitalized oily matters, becomes deficient in fibrine, with one exception the most highly animalized of its elements, and hence is less fitted to renovate the waste of the system, or to sustain the muscular strength. Thus it is that this fulness of form of the drunkard is but a specious semblance, unaccompanied with any genuine vigour. Indeed, physiologists have well remarked, that the existence of this description of obesity is rather in itself a proof, and a direct proof, that the vitality of the system has already been reduced to a lower standard, bearing as its results a subversion of the physical and mental powers, and a proneness to diseased changes.<sup>1</sup> So far from its evincing the bloom of life, it is actually a token of the commencement of those alterations which terminate in death: and which may even be held, in a certain sense, as capable of persistence after death, as shewn by the changes

<sup>1</sup> Donders en Bauduin, *Natuurkunde van den Gezonden Mensch*: Amsterdam, 1851, d. i. p. 317.

remarked on lifeless muscular substance under the microscope, and by the gradual conversion of dead bodies, when guarded from other modes of decomposition, into the fatty substance named adipocere.

As the appetite gradually wanes, and at last fails utterly, and the equally feeble digestion is destitute even of materials to act upon, this vitiated nutrition necessarily ceases also; and at last, if none of the many intercurrent forms of disease to which the drunkard is liable anticipate the event, the stores of fat become re-absorbed, or remain only within and over the abdomen, and the all but total emaciation which ensues denotes how universally the vital energies have been prostrated, and how nearly they approach to their entire extinction. The muscles themselves, in the later stages, are sometimes found blanched, and diminished to a fourth or a fifth of their ordinary volume; and even the heart is usually found reduced in dimensions, and soft and flaccid in substance. Yet even this meagre condition of the body, although it evince the consumption of the whole stores of supplementary fat, is by no means inconsistent with the continued existence of that fatty degeneration which we have described as taking place within the tissues of the organs, and to which we shall have frequent necessity for farther reference; for, as it is really the natural structure which is here supplanted by the new material, there is a possible and a frequent coincidence between the existence of this localized superabundance of fatty substance, and a marked diminution of the general bulk. To so extreme a degree may this substitution of material sometimes proceed, that a case is on record, where all the

organs of the chest and the abdomen, and even the muscles, in the body of a drunkard, were found converted, in a great measure, into a fatty substance.<sup>1</sup> All fat, however, in the drunkard, presents an unhealthy aspect, is greyish-coloured, and soft.

The blood, which we shall now suppose to have received the chyle from the thoracic duct, thus approaches the right side of the heart, conveying with it a taint which is first to be felt by that organ, and then, through its agency, is destined to be diffused everywhere throughout the system. We have seen that it carries with it a portion of the alcohol, which has been absorbed from the stomach, and from the upper part of the intestinal canal; that it is loaded with the imperfectly vitalized fat, and is deficient in the more fully assimilated solid material; that it is charged with a superabundance of carbon (carbonic acid or hydro-carbon), which it still derives from the alcohol, and which is here to be regarded as merely excrementitious, yet of which it is unable to divest itself; and that, possibly also, it is vitiated by other constituents of the bile, which have failed to be separated by the liver. After irritating the delicate structure of the heart, and forcing it to alternations of excitement and languor through the presence of at least the first of these ingredients, the blood is transferred to the lungs, where a part of the spirit it contains is perceived to exude, and to escape with the expired air, in which it is easily detected by the smell. Yet an appreciable part of the spirit is still retained, and returns to the left side of the heart,

<sup>1</sup> Rösch, *Der Missbrauch geistiger Getränke*, p. 98.

mingled with that blood which is thence to be distributed, by means of the arteries, through the whole of the organism. But besides, the contact of the air within the lungs has not sufficed to complete those other changes in the circulating fluid, which confer upon it the characteristics of arterial blood, and are necessary to purify it, and adapt it to its uses in the system. The mucous membrane lining the air-tubes, and the minute vessels which constitute the mass of the tissue of the lung, have become also irritated by the presence of the alcohol, and are thrown into a state of congestion which is unfavourable to the aeration of the blood; the spirit thus creating here, as in the liver, a twofold mischief, by bringing a more than ordinary load of impurities into an organ, the appropriate functions of which, for its separation and expulsion, have been at the same time, and through the same agency, seriously impaired.

Thus the constitution of the blood remains deteriorated, or its improper elements are only partially expelled; and instead of being converted into a bright red, it is still of a dark colour, and still contains more than its just proportion of carbon, and less of oxygen, or, in other words, retains the character of that in the venous circulation, with its reduced standard of vitality. There is still also a superabundance of oily or fatty matter, and still a deficiency of fibrine, while, as the deterioration proceeds, the blood corpuscles, or the portion most advanced in vitalization, and the most directly applicable to the purposes of restoration, become also remarkably diminished in amount, and present a lower grade of plasticity, especially betokened by the varying degrees of absence of what is termed

their haematin, or colouring substance. The distinguished Dutch chemist, Mulder, attaches much importance to the presence of a due proportion of oxygen in the blood, for the purposes of a higher animalization of the nutrient matters, and more especially for the promotion of the growth of the muscular fibre, which he has shewn to consist of what he has designated the dentoxyde of proteine, or a combination of albumen and oxygen ; so that, in this light also, we have, in this farther interruption of the series of vital changes, another and direct assault upon the bodily vigour.<sup>1</sup> But physical, and even mental, exertion increases the amount of exhalation of carbonic acid by the lungs, and therefore also operates by increasing the power of resisting the effects of spirits. Hence the drunkard, reduced to inaction, loses yet another of his grounds of vantage. Fasting, on the other hand, causes less carbonic acid to be exhaled ; and fasting increases the proneness to intoxication, and the mischief of its results.

The real existence of these conditions in the drunkard admits of direct proof, either through abstraction of the blood during life, or through examination of the body after death. The fat globules in the large bloodvessels are, on dissection, frequently perceptible to the naked eye ; the alcohol can be detected by the smell, or, still more unimpeachably, can be reproduced by actual distillation, the researches of many enquirers, from Percy to Buchheim, having exhibited it, not only in the blood, but in the liver, the bile, the kidney, the spleen, the

<sup>1</sup> Van der Kolk, *Invloed van sterken drank op het lichaam*, p. 15.

lungs, and the brain, and nowhere in so great abundance as in the latter organ; while the blood in the arteries is observed to be of a dark hue in the less advanced stages, or, in the later ones, paler than natural. Hence the purple tinge of the lips, and the frequently livid colour of the drinker, in the middle portion of his progress; and his pale or sallow complexion, with inelastic and waxy surface, towards its close. Of the eight cases examined by Huss, the lungs were found healthy in three only: of a class of cases reported by Dr Ogston, they were found affected in 75 per cent. of the whole.<sup>1</sup> Of the deficient action of the respiration in the drunkard, we have also another evidence in the fact, that according to the investigations of Prout, Vierordt, Nasse, and Böcker, the proportion of carbonic acid, evolved from the lung, is least in individuals under the influence of ardent spirits.

The latter author reports farther, that, in five examinations of the blood of inveterate drinkers, he found uniformly the blood corpuscles considerably reduced in quantity, and the other solid constituents similarly diminished. Lecanu and Zanarelli have examined the blood after excesses in drinking; the former finding 14 per cent. and the latter about 10 per cent. of fatty matter, with simultaneous defect of the more highly animalized principle of fibrine. Sometimes the blood of the drunkard undergoes a whitish milky discoloration, as a result of this superabundance of fat, which may be demonstrated by the microscope.<sup>2</sup> Examples of this description have now been noted by numerous observers. In a case, which

<sup>1</sup> *Brit. and For. Med. Chir. Review*, vol. 13 and 14, 1854.

<sup>2</sup> Wedl, *Grundzüge der path. Histologie*, 1858, p. 61.

was under the care of another practitioner, but which I had casually an opportunity of observing, the blood abstracted from a vein in the arm was thus nearly destitute of its usual red colour. The patient was one of three who died in the same family from the results of intemperance ; his brother, of like habits, having perished, after a short interval, from an apoplectic seizure. As the emaciation of the drunkard proceeds, the proportion of the watery fluid in the blood increases, and its reparative powers simultaneously decline ; the constant renewals of the poison maintaining the universal taint in the system, while they withhold the opportunity for retrieval.

It is manifest that a blood, the depravation of which we have thus traced and exhibited, can visit no part of the organization, without bearing along with it the evils of its source ; either becoming of itself the origin of disease, or, where a malady has arisen from other causes, materially, or even utterly, impairing the powers of the system to resist or throw it off. Before leaving the heart itself, it tends to deprave the special nutrition of that organ, by imbuing its structure with fatty matters, which frequently remain there as permanent deposits, or transmutations of texture. If we now follow it to the brain and spinal marrow, the great centres of nervous energy, as of perception and intellect, and examine into its operation on these organs, we shall find such evidence of its influence as will explain to us clearly, in as far as such subjects admit of explanation, the origin of those disorders of the mind, and of the faculties of sense and motion, which we have described as among the most ordinary inflictions of the drunkard. As it penetrates in

great abundance into the nervous mass, and brings the fibres into direct contact with the alcohol with which it is impregnated, the initiatory effect is that uniform one of excitement, which is everywhere the result of the action of the intoxicating fluid. Along with this immediate excitement, we have a stimulation scarcely less direct, through the quickening of the circulation which has taken place from the incitement of the heart and arteries. Hence the accelerated flow of vivid conceptions and images, which please by their variety and sprightliness; along with that vivacity of movement which evinces the feeling of vigour of frame and cheerfulness of mood.

This state, however, like every other description of excitement, has soon its period of depression, which proceeds as far below the natural level, as the other had risen beyond it. A renewal of the recent enjoyment, therefore, becomes ever a matter of greater difficulty; for part of the stimulus must now be employed to restore the system, before the other can reach to elevate it. It is equally obvious that, if the spirits have been taken as a substitute for repose or nourishment, to remove or to mask the sensation of fatigue, or to excite to continued labours, the subsequent depression must, by a natural sequence, or rather by a sheer and simple necessity, be proportionately still greater: because, where a vigour already exhausted by effort is urged into fresh effort, through that which impels merely, but cannot sustain, there must be a twofold drain upon the energies of the system; and the larger toils, proceeding upon the scantier sustenance, must lead to a deeper exhaustion, demanding more and more liberal means of restoration.

Thus the drinker is led on to a more frequently repeated, and to a deeper and deeper debauch, during which he is preparing the way for the development of a new order of phenomena. The inordinate, and continually renewed, impulsion of blood within the brain gradually produces a permanent state of congestion of its minute bloodvessels ; which necessarily causes a certain, and often considerable, amount of pressure upon its substance, and by this the integrity of its functions is materially disturbed. It is this description of congestion which usually gives rise to the apoplexy of the drunkard ; in which the individual clots of the effusion are seldom large, but occur more frequently in minute portions, and in considerable number, or in the form of what is termed capillary apoplexy.<sup>1</sup>

The qualities of the blood, moreover, having been essentially impaired, it is no longer fit to sustain the brain and spinal marrow in that state of healthy nutrition which is alone consistent with their efficient action. The brain thus becomes subject ultimately to a form of wasting, or atrophy, like that of extreme age, with watery effusion on its surface, or within its ventricles. Hence one leading cause of the lower scale of animation, the stupor, and mental incapacity of the confirmed drunkard, in his sober intervals ; while his inebriety undergoes also a change in its character, but only to gain in brutishness what it has lost in gaiety. To the same alternation or combination of irritating and depressing causes, is to be ascribed the origin of those tremors, neuralgic pains,

<sup>1</sup> Engel, *Die Säuerdyskrasie: Zeitschrift der k. k. Gesellschaft der Aerzte zu Wien*, 1845, p. 177.

spasmodic contractions, startings, convulsive or purely epileptic attacks, illusions or hallucinations, a host of miseries, which afflict the drunkard, according as the sensory or motor nerves are chiefly affected. As the system becomes weakened from loss of appetite and absence of food, or of the power to digest it, whether through the disordered condition of the stomach itself, or of its state of innervation ; or of the gastric juice, which, like the other secretions, a vitiated blood can no longer prepare of a proper quality ; and as ardent spirits become the almost exclusive sustenance, the deleterious influence extends itself more widely : both because the alcohol is now presented nearly uncombined with other matters, and is therefore received into the veins more readily, and in greater concentration, and because the weakest frames are ever the most easily excitable, and shew the most feeble reaction against the resulting depression.

In the meantime, while the vigour of the muscles continues to fail directly from want of solid materials for their nutrition, it fails also indirectly, as well as the co-ordination of their action, through defect of nervous energy. Not the less, by a strange perversion of belief or of argument, the artizan is led to seek for that which is to strengthen him in his toils, in the use of this liquor, which contains in itself the materials for no real sustenance, and which impedes the digestion of all proper nourishment, which vitiates the blood, robs the muscles of their substance, excites the energies into a delusive and transient vigour to depress them the deeper afterwards, and clogs ultimately the entire mechanism of life : or he makes this the mere pretence for a paltry gratification,

because of which he risks the final sacrifice of his honour and his existence. It may appear a slight matter to add to this, that the skin, which was at first moist and perspirable, becomes dry, harsh, and impervious; yet, in this checking of the important function of transpiration, we have another and a powerful means of concentrating the alcohol, along with other impurities, within the system, and of directing its influence more immediately upon the centres of life.

We have also plain evidence of the excitement and disordered nutrition, both as they have existed in the brain itself and in its investing membranes, through an examination of their condition after death. The congestion which has taken place within the head is proved by the dilated state of the bloodvessels ramifying upon the delicate membranes with which the brain is proximately surrounded; and that these have also suffered more directly in their natural texture, is farther shewn by the frequent occurrence, within their substance, of spots, or broad patches of opacity, which Dr Todd,<sup>1</sup> with other observers, has found to consist of the fatty material so characteristic of degeneration of structure in the drunkard, and by the presence of watery effusion between or beneath them. There are cases, however, in which the effusion has neither been accompanied by signs of congestion during life, nor by alteration of the bloodvessels appreciable after death, yet in which it is not the less the result of habits of intemperance; but it is here a secondary and not a primary effect, and depends upon the condition of

<sup>1</sup> *On Delirium and Coma*, p. 32.

exhaustion, and the tenuity of the blood, which has subsisted in the latter stages. It is chiefly under these circumstances that the brain itself has been found diminished in volume, as if it had ceased to be nourished, and had shrunk within its bony covering, and the effusion had been merely a supplementary effort to fill up the vacuity.

Besides this congestion in the vessels of the membranes, a similar condition is also usually found in the substance of the brain itself, where it sometimes proceeds so far as to give to the convolutions on its surface a compressed and flattened appearance, while the interstices between them are more or less obliterated. In making a section of a brain in this condition, the minute ramifications of the bloodvessels are not only found gorged with blood, but they are actually dilated in many instances, and may be observed on the cut surface with numerous gaping orifices larger than natural, and chiefly in the white or medullary substance. This degree of congestion, which marks so distinctly the amount of excitement to which the brain of the drunkard had been subjected during life, is frequently observed to be more obvious in particular spots, so as to give to these a thickly punctuated appearance. When the vessels are closely examined, it is not unusual to find that their walls are easily lacerable, their tissues being altered through the presence of those so-called atheromatous deposits which Mr Gulliver has proved to consist of fatty matter, and which thus represent here, once again, the prevailing and characteristic degenerescence in the system of the drinker. Sometimes, also, though less usually, the larger bloodvessels of the brain are found to have suffered dilatation, or are thickened in their coats,

and easily lacerable. Under this condition the vessels readily yield to the pressure of their contents; and we have thus a farther explanation of the occurrence of those apoplectic, or more decidedly paralytic, seizures, which are frequently observed in the intemperate, and which are the result of an escape of blood, and its effusion upon the brain, in contradistinction to those ordinarily less violent affections which depend simply upon congestion, or an accumulation within the vessels, or upon the influence of the vitiated blood.

Where the congestion has proceeded to inflammation, which in the drunkard is usually of the sub-acute or chronic type, it is occasionally followed by the formation of one or more abscesses within the cerebral substance. A female, whose habits of intemperance were extreme, and whose husband was not less addicted to the degrading vice, died many years ago in this city, under circumstances which had given rise to suspicions of violence, and which had attracted the attention of the authorities. On assisting the surgeon on whom devolved the duty of examining into the cause of the woman's death, we found the substance of the brain studded with a number of distinctly circumscribed abscesses, from the size of a bean to that of a filbert. The body was more than usually corpulent, and the liver was in an advanced state of fatty degeneration.<sup>1</sup> The fatty deposits in the walls

<sup>1</sup> This case afforded, in every respect, a peculiarly sad example of the results of intemperance. The man, a native of England, was a worker in the precious metals, and from his great skill had been able, and even still was able, to earn a very high remuneration. It was his own expression, that if he had conducted himself with greater prudence, he might have ridden in his carriage. Yet his dwelling was a dingy closet, in a mean neighbourhood: and when the body had been placed upon

of the arteries may present themselves in any part of the system : promoting the risk, wherever they occur, of results disastrous in proportion to the importance of the organs with which the vessels are connected, but nowhere free from the implication of serious consequences. Even in the prime of life fatal results are prone to follow this alteration of structure in the drunkard. A man, thirty-five years of age, greatly addicted to intemperance, was seen in a dying state, and expired soon afterwards. On opening the body, we found within the chest a large amount of effused blood, which was traced to a small opening in the descending aorta. This part of the vessel presented the organic change which has been described : its walls being softened, attenuated, and easily lacerable, especially near the point at which they had yielded.

In some instances, the general mass of the brain has been found softer than natural, and in some harder ; but as these conditions are rarely distinctly marked, and may depend upon circumstances merely accidental, such as the period which has intervened before the examination, or the relations of climate and temperature, it is unnecessary to insist upon them. Of more importance, however, are those examples of local softening which are frequently met with, and which are not only sufficiently obvious in themselves, but which admit of being appreciated accurately through comparison with the more natural standard of the parts contiguous. This description of softening may present itself in any portion of the brain, and may be regarded, in a number of cases, as the product of

a small and tottering table, with the limbs supported by the back of a chair equally shattered, we had occupied the whole of its furniture. The bed was a heap of rags, placed on the floor in one of the corners.

chronic congestion or inflammation, and in more, perhaps, as an effect of the circulation of a blood deficient in fibrine, and otherwise ill qualified to sustain the parts in a state of healthy nutrition. Thus, softening is not an independent disease, but rather a product of various, and even of almost conflicting morbid conditions. Gluge has observed it, in several instances, in connection with the presence of fatty matter in considerable quantity; and he has, on the other hand, noted the existence of deposits of fat in the brain of a drunkard, in which there was no trace of softening. The vessels of the cerebellum, and of the spinal marrow, have also been found occasionally dilated in those who have died the victims of intemperance. Lastly, it may again be noted here, that many observers, along with M. Calmeil, state that most of the cases of a form of incurable palsy which occurs in lunatics, and which has been termed the palsy of the insane, or general progressive paralysis, have been observed to present themselves in those who have been formerly addicted to excessive drinking.

In establishing a connexion between these morbid appearances and the symptoms which have presented themselves in the drunkard during life, we can have little difficulty in asserting that, wherever they have been found to occur, they are amply sufficient to account for the reduced vital energy, the mental disorder, the stupor, the imbecility, the giddiness, the affections of the senses, and the palsy, complete or incomplete, which constitute a part of his melancholy depravations. Yet, certainly, they are not always encountered with such unfailing uniformity as to permit us to regard them as standing in any uncondi-

tional relation of cause and effect. The nervous organization is so delicate in itself, and the nature of its functions and of its structure so mysterious and so intricate, that we must admit the possibility of its actions becoming disordered in the extreme, without the appearance of any physical alteration in its texture, such as can be observed by the most careful inspection. Where, therefore, the more evident signs of change may happen to be wanting, we must still call into account the blood-poison which has been continually diffusing itself through the wonderful apparatus of thought and volition, and of the vital movements, and must attribute the degeneracy of the functions to the taint at their source.

Neither external symptom, nor alteration of internal structure, can at any time be viewed as an isolated condition or phenomenon, without the risk, or even the certainty, of error. Each must be considered with reference to the circumstances by which it is surrounded, and where these are not strictly parallel, we can have merely the vagueness of an analogy, and never the certainty of demonstration. Thus, of two similar states, that which establishes itself suddenly will be accompanied by different phenomena from that which is constituted gradually, and while the changes in the one will be more violent, in the other they will be more enduring. It is usually in this gradual manner that the nervous energy of the drunkard glides into decay. There may be no assault of rapid and extensive injury, to which we may be able to assign a special origin. All the parts of the great nervous centres appear to be simultaneously affected: the intellect suffers in the brain; the co-ordination of the movements in the cere-

bellum, or lesser brain;<sup>1</sup> and the movements themselves, and sensation, in the spinal marrow. Yet this may be all accomplished by scarcely perceptible gradations, under the protracted influence of a pernicious habit; while, throughout, the sequence of the phenomena still remains too strict and too obvious to permit us to question its reality. Thus in the ordinary case of diseased changes being discovered in the brain of the drunkard, or in the exceptional case of no such alterations being prominently observable, we are alike constrained to admit the operation of an individual cause, acting injuriously upon the nervous system; and where organic changes in that system actually are perceptible, we can only regard these as inward and structural effects of that disordered action, of which the symptoms observed during life were the outward and functional expression. In explaining the phenomena of disease through the appearances on dissection, it is to be recollectcd, though it is not always recollectcd, that these are the effects of disease, and neither its causes nor its essence; although, when once established, they may, as secondary causes, have reflected back an important influence upon the original disorder.

We have thus traced the operation of habits of prolonged intemperance, firstly upon the apparatus and the products of digestion, and through these upon the blood; and secondly, the effects produced by this vitiated blood upon the liver, the heart, the lungs, the bloodvessels, and the brain and nervous system; as well as the deterioration it has caused in the general nutrition, through

<sup>1</sup> In fatal cases of intoxication, the cerebellum, according to M. Flourens, becomes the seat of suffusion of blood.

the reduction of certain of the animal substances to a lower grade of vitality. We have seen that the stream of life has carried with it everywhere a poison of which it was unable to divest itself; that it has introduced its bane into those very organs, as the liver and the lungs, which were destined for its depuration, to mar their efficiency by disordering their action and deranging their structure; that the most vital of the functions, as well as the highest of the faculties, have thus sunk before its deleterious influence; and that it has impressed throughout, with more or less distinctness, the permanent tracks of its progress. Still impure and loaded with an excess of carbonaceous matter, and even still, as has been proved, impregnated with alcohol, it farther traverses the circulation to seek its third principal emunctory, the kidney; the last remaining outlet by which its impurities may be ejected from the system. Along with these, the blood has now to throw off also a large part of the organised principles, which, in the midst of the natural changes of supply, of waste, and of renewal, perpetually attendant upon the intimate or molecular actions of the living system, having become effete and useless, has been taken up by the absorbents, and carried into the veins; whence, modified and recombined by the vital chemistry, it is diffused with the circulation, chiefly in the form of what is termed urea. This substance, abounding in the elementary principle of nitrogen, is now to be ultimately poured out, as an exhausted and noxious matter, by this its allotted channel; as the lungs, the skin, and the liver had been the leading channels for the residue or waste of the carbon.

Whether it be that the kidney is of a really less delicate organization than other parts of the system with which the perverted blood has come into contact, or that its office is more simple, and therefore its single duty of discharging the excrementitious portions of the blood less susceptible of detriment; or that the alcohol in the blood has now been diffused through the general mass of the circulation, and is therefore less concentrated than in the earlier part of its progress through the veins of the upper portion of the intestines; it is at least certain, that the proportion of examples of affections of the kidney in the drunkard is much smaller than that of diseases of the liver. Such examples, however, recur with too great frequency, and are too disastrous in their consequences, not to demand particular attention, and force upon us the conviction, that the functions of this organ also, direct and uncomplicated as they appear, are continually overtasked by the excesses of the intemperate, and that, in a considerable number of cases, its texture is seriously injured, or even ultimately destroyed. The first effect of habits of intemperance is, here as elsewhere, a degree of excitement in the local circulation, by which the blood is accumulated in too great quantity in the minute vessels: hence congestion, and a tumeified and obstructed condition of the organ, with a tendency to sub-acute or chronic inflammation. The excitement of a single debauch, or of debauches at protracted intervals, may appear to a casual observer to promote the function of the kidneys; but there has been here neither that excess nor continuity of action which we have described as necessary to establish a state of congestion,

and the excitement has been limited to its usual primary effect of accelerating the movements.

It is as the indulgence confirms the habit, that the habit develops the danger. Dissections, at different stages of progress, shew that the organ, which was at first simply enlarged, begins afterwards to present tokens of material alteration. Its exterior surface assumes a yellow tinge, varied by specks or patches of red, and sometimes with little granular projections. On section, its outer or cortical substance shews the yellow tint extending throughout, with different shades of intensity; while the inner, or medullary substance, may still retain its natural appearance. As the morbid process advances, the cortical substance becomes diminished in bulk, and the medullary part verges also into yellow. The uriniferous tubes are observed to be filled with globules of fat, which appear afterwards in their interstices; or their structure is broken up, and fatty matter occupies their place. Thus we have once again the characteristic depravation into that material which is the lowest in the scale of animal organization, and which, from the absence of nitrogen, approaches the nearest to the generality of vegetables; as if it were the fate of the drunkard to descend everywhere in the scale of being, and the most hidden parts of his structure were made to bear the marks of his degradation, as indelibly as these are revealed outwardly in his aspect and demeanour. The urine now becomes defective in its solid, or purely excrementitious portions, while the animal principle of albumen is eliminated in their place; so that the blood loses, in the latter, that which it ought to have retained, and

retains in the former, that which it ought to have lost. Hence, in the constantly more tangled maze of diseased actions and reactions, we have now a new source of debility, and of perverted, or defective nutrition ; and other tendencies are formed for that farther succession of disorders, the nature of which has been already indicated.

Towards the close of the disease the kidney is generally atrophied. Watery swellings of the face and limbs now usually present themselves, and are often accompanied by dropsy of the abdomen or of the chest ; especially in those common examples, where the affection of the kidney has been associated with fatty degenerescence of the liver. Apoplectic stupor, catarrh, pleurisy, or diarrhoea, are other concomitants, ready to ensure the fatal termination : partly the results of the deleterious principles congregated and retained within the blood, which, from the source of life, the drunkard has changed into its poison ; and partly of the mass of watery fluid accumulated within the system, which overwhelms other organs, while seeking the egress denied to it through its natural channels. In the former of these senses, therefore, it may be sadly and truly said of the drunkard, degraded otherwise so far below his better nature, that it virtually ceases to be a fable to speak of the reptile perishing by the venom which it has itself engendered. The fatty degeneration of the kidney is generally an incurable disorder, and instances of recovery are more especially rare where it has been known to occur as the product of intemperance ; and this, says Christison, is its chief predisposing cause. Gluge is also inclined to attribute its prevalence, at Brussels, principally to the immod-

erate use of brandy. In a beer-drunkard, likewise, who was affected with dropsy, and who died from erysipelas terminating in mortification, the latter distinguished pathologist found the kidneys of twice the natural size, and containing a large accumulation of fat globules, within and around the uriniferous tubes.

Affections of the spleen have also been described by authors, as ranking among those which may occasionally be justly attributed to the effects of habits of intoxication. In the case of the discharged soldier previously referred to, this organ was found greatly enlarged. Its normal dimensions, according to Meckel, are four inches in length, by three in breadth, and one in thickness ; but in this case all these dimensions were doubled, so that the cubic contents were eight times those of its healthy condition. It was covered with a layer of coagulable lymph on its anterior surface, and had contracted extensive adhesions with the stomach, the left lobe of the liver, the diaphragm, and the large intestine. The spleen has also been observed to be eularged, in cases of death from the drunkard's or shaking delirium. Such instances, however, neither occur with sufficient regularity, nor are marked by constitutional appearances sufficiently characteristic, to claim any decided attention in relation to our inquiry.

But causes, apparently the most inadequate, sometimes arrest suddenly the career of the drinker. Of this, the following instance may suffice as an example. A woman, whose appearance, along with the peculiar tremor of the hands, denoted the drunkard, had what seemed to be a slight catarrh, and no apprehensions were entertained regarding

her. In two days, however, shortly after awaking in the morning, she suddenly expired. She had no difficulty of breathing in the course of her illness, or before her death ; and, on carefully examining the body, nothing was found to account for the rapidly fatal termination, unless that the lungs, spleen, and liver were found remarkably congested with blood. The case appeared one of those instances in which, having tainted the springs of life, gradually undermined the vigour of the constitution, and impaired the intimate structure and action of the organs, the drunkard becomes liable, on the operation of merely trifling agencies, to results of the most serious description ; the most casual, and seemingly least unfavourable circumstance testing too violently the capacity of the vital forces, now unable to sustain what might have been otherwise a scarcely appreciable shock, or to retrieve what might have been a scarcely appreciable injury. Thus, in all probability, in the instance of this woman, the smaller bloodvessels, or capillaries, of certain of the principal internal organs, had been lowered in their powers of vital contractility to that point in which their functions could be farther maintained, and life continued, in so far, and only in so far, as they were subjected to no farther perturbing causes. But let any fresh elements of diseased action, however insignificant, and in whatever manner, be brought to bear upon organs in this condition, then the depressing forces at once preponderate : the capillaries cease to urge onwards the current of the blood ; it stagnates in them, and in the larger vessels communicating with them ; the vital organs become clogged, and their functions arrested ; and death is sure to

follow, because the conditions of life have ceased to exist. Thus destruction surprises the drunkard, and overwhelms him with the most trivial weapons ; the stroke of which he has invited, laying open his vitals before them, and sharpening their efficacy with his own hand.

Lastly, it now seems comparatively easy to offer a rational explanation of that condition of combustibility of the body, which is fitted to give rise to the description of burning usually designated spontaneous combustion. Few now believe in the strict accuracy of the latter designation, or in the doctrine which it involves, and fewer still will credit it after reading the clear, though, it must be confessed, somewhat dogmatical exposition of Liebig. But when this distinguished chemist proceeds so far as to question, whether the ordinary degree of combustibility of the human body be itself really capable of increase in any remarkable degree, he seems to fall into that logical error, of inferring without weighing all the possible circumstances, which he rebukes so sharply in others ; and leaves us to desire that an equal familiarity with the pathological room and the hospital, as with the laboratory, had placed him in a better position for judging of the manner in which the action of external agents upon the living structure may be controlled by circumstances, or modified by disease. If it have been proved that the blood has carried with it the alcoholic fluid to every portion of the body, imbuing the inmost recesses of structure as it traverses the more minute ramifications of the blood-vessels ; if it bear with it thither also a considerable portion of fatty or oily matter in all parts of its circuit ; and if, moreover, it has everywhere laid down this fatty sub-

stance in remarkable exuberance, either as a simple deposit, or, what may be here of far greater importance, as an actual conversion and degradation of other structures into its lower form of animality; it is manifest that we have here abundant materials of an inflammable nature, which must present a ready fuel to any casual application of fire which may reach them from without.

The objection<sup>1</sup> that a non-combustible substance, or one difficultly combustible, is not rendered more so by being joined to a more combustible one, falls to the ground, when we thus remember that, with the advanced drunkard, it may be less a combination of a substance of slow combustion, like flesh, with one of ready combustion, like fat, than an absolute conversion of the former into the latter; and therefore the existence of a combustible substance more exclusively. And even this fat of the drunkard differs in its characters and aspect from ordinary fat. May it not have acquired properties which render it still more readily combustible? What new combinations of alcohol, or its constituents, with the organic substances, dependent on what molecular or isomeric changes, may be effected by the chemistry of the living system under such circumstances, has assuredly never hitherto been ascertained so fully as to entitle even the most ingenious speculator to speak dogmatically, when he has to oppose facts which have not yet been controverted, or proved to be capable of any more certain explanation. Professor Bischoff,<sup>2</sup> like Liebig, insists strongly on the large proportion of water in the human body, as inconsistent with the

<sup>1</sup> Liebig, *op. citat.* p. 21.

<sup>2</sup> Henke's Zeitschrift für die Staatsarzneikunde, b. ix. p. 162-210.

possibility of its entering into combustion. But water may be expelled by heat, from the combustion of other materials, existing in more than ordinary abundance. Neither does this objection come reasonably from a chemist; for if water itself does not burn, its elements do, and chemistry and electricity easily produce the wonder. Electricity separates the combustible material, and applies the spark; and potassium starts into flame upon the moist surface that supplies the fuel. Such facts, alone, place us in a position which, if it does not enable us to explain the phenomenon of spontaneous combustion, in the sense in which many have understood it, precludes us at least from denying peremptorily the possibility of its occurrence; if we are to be urged to reject the authority of evidence, and to take the unstable ground of relying exclusively upon *a priori* reasoning. Besides, it is unjust to argue unhesitatingly from facts in ordinary chemistry, to processes in the living organization. Professor Bischoff appears to question this, and asserts that, if it be true that  $2 \times 2$  be 4 in chemistry, it must be true everywhere else. But we must first well assure ourselves, that what we know to be 2 in chemistry, and what we assume to be 2 in organic life, are really identical quantities. Failing in this, we fail utterly, and have been merely wasting ingenuity upon an abstraction. And let it be remembered also, that the sufferers have been nearly universally females, in whom the carbonaceous, or combustible principles naturally predominate, as the nitrogenous in the male. It would certainly savour somewhat of simplicity, to quote Plutarch as an adequate authority, at the present day, on any point of scientific speculation; but where he

speaks to matters which, from the customs of the times, naturally came under his own observation, to an extent which cannot occur now, his known honesty renders him an available witness. At all events, it appears interesting to notice, that he mentions it as a usual practice of the officials, in burning the bodies of the dead, to "put one female body with ten males upon the same pile;" for that, he adds, "contains some inflammable and oily parts, and serves as fuel for the rest."<sup>1</sup>

With this concurrence of circumstances, then, and thus ripened for the consummation, the unhappy drunkard sinks down in the stupor of intoxication, and comes into contact with a burning candle or with glowing embers. The fire penetrates the surface, and approaches the more combustible matters beneath. The fat melts, and the mingled oil and spirit burn with a smouldering flame, which is kept subdued by the admixture of other animal substances less inflammable, and yet attains sufficient power to consume the solid portions of the body, themselves, even to the bones,<sup>2</sup> deeply interpenetrated with fat. Doubtless all the requisite conditions must concur, in their fullest development, to admit the production of this extraordinary effect. It can be no argument against the explanation, that the body of a healthy person, poisoned by alcohol, is not susceptible of this form of ignition; because the very fact of the previous healthy condition places the individual beyond the limit of efficient causation. Any one may ascertain, however, that a portion of fat, which has been steeped for some time in

<sup>1</sup> Plutarch's *Symposiacs*: Quest. iv.

<sup>2</sup> Rokitansky, *Op. citat.* (*Die Säufer-Dyskrasie*), b. i. p. 547.

ordinary proof spirit, may be made to burn without difficulty, with the aid of little extraneous combustible matter; and that the flame actually presents the dull lurid appearance which has been described as characteristic of the combustion of the drunkard. But let the explanation be what it may, the fact of the occurrence appears as strongly vouched as it is deeply impressive; and, if it constitute a strange and terrible visitation, it at least depends upon too large an amount of evidence to be hastily rejected as incredible.

In conclusion, if I have succeeded in rendering the tenour of the preceding details as comprehensible to the ordinary reader, as they are interesting to the scientific inquirer, the perfect and natural sequence which has prevailed throughout the chain of causation cannot have failed to have arrested his attention. Wherever the effects of the alcoholic liquors have shewn themselves, they have been marked by two leading characteristics: primarily, the accumulation of blood in the vessels of the organ affected; and subsequently, the perversion of its nutrition, and the fatty degeneration of its tissues. But, as has been already stated, it is by no means intended to be implied, that the changes in the different organs of the body are invariably effected in the precise order of succession through which we have traced them. And not everything which is discovered in the body of the drunkard is the result of his drunkenness. An amiable zeal to establish a principle may incite to the indiscriminate gathering together, and enforcing, of every fact which may appear to bear, however remotely, on the subject; but the more dispassionate observer will study

to keep in remembrance, that to be led by enthusiasm is something wide apart from being convinced by reason, and that he who has arrived at convictions in his own judgment, through any other than a strict method, will never be able to impress them enduringly upon that of others.

Of the justice of that interpretation of the result of the drunkard's habits which we have here furnished, as appreciable through an examination of the body after death, we have a threefold testimony to offer: firstly, in that uniformity of effect which has been seen to pervade the morbid changes wherever situated, and which seems to imply unequivocally the existence of a uniformity of cause; secondly, in the fact, that the most careful and experienced observers, in times and countries widely separated, and beyond suspicion of bias or collusion, have demonstrated, from the result of their investigations, that in the *prevailing abuse of intoxicating liquors* this uniform cause is manifestly to be discovered; and thirdly, because by many inquiries, and particularly by those more directly instituted by Rösch<sup>1</sup> and Ogston,<sup>2</sup> the subjects of which were designedly selected from among such drunkards as had perished suddenly from accident or suicide, and in whom, therefore, there existed the smallest risk of the peculiar results of their intemperance being found complicated, and so confounded, with those of any other fatal malady which might be extraneous to them, it has been proved that the whole range of effects discovered

<sup>1</sup> Ueber die Vergiftung durch Weingeist: Henke's Zeitschrift für die Staatsärztekunde, 1850, p. 245.

<sup>2</sup> Brit. and For. Med. Chirurg. Review, vol. xiii. and xiv. 1854.

corresponds with that which has been held to be elicited from the more general sources.<sup>1</sup> Thus, by founding upon one set of facts the most ample and consistent, and seeking to exclude another which might have confused us, we intercept the sources of error, and give to our conclusions the utmost certainty that, in the existing state of science, they seem capable of admitting. For although, as we have formerly stated, it would be rash to maintain, upon the consideration of a few instances only, that identity of effect involved absolute identity of cause, yet when these instances become extensively multiplied, and when unity of result recurs undeviatingly under diversity of conditions, one condition remaining persistently the same, we have, through this multiplicity and uniformity, the surest evidence of which such topics are capable, that in that condition the really efficient agency has been discovered. I have stated this thus methodically, because it leaves nothing to depend upon a merely general impression or assumption, but comprehends the sum of what has been attempted to be proved by specific facts, or direct portraiture, throughout the course of these observations; and because I believe that, by silencing every pretext through which the drunkard has suffered himself to be seduced, it leaves him no other resource than to admit the mingled guilt and folly of his propensity, and to shudder at its results. It cannot be easy to extort reflection from the thoughtless, or concession from the hardened. Yet where weighty

<sup>1</sup> To these I may add the oral testimony, of a like nature, of Dr Dlauby, Professor of legal medicine in Vienna, as to numerous facts observed by him in his official capacity in that city.

truths are known to exist, it becomes a duty to proclaim them, to reiterate them, and to assert their prerogative. They will strike somewhere into the stubborn soil : or, still better, they may fall gently on some overshadowed recess in our holier nature, and restore its brightness.

There is a kind of confirmation of the truth of our general conclusions, in the results which have been arrived at through experiments regarding the effects of intoxicating drinks upon the lower animals. We find recorded some interesting facts of this description in the valuable work of Professor Huss,<sup>1</sup> to which I have already had the gratification of making repeated reference, as one in which the author paints the different states of the drunkard so truly, that the observer, who follows nature, must usually, in a large degree, follow him also. Professor Dahlström, of the Veterinary School at Stockholm, selected three dogs of nearly the same size, but differing in their ages and temper. To these he gave daily, and at once, during the course of eight months, six ounces of the common brandy of the country. The results were nearly the same in each of the animals. One of them died exhausted towards the close of the period, and the other two were killed ; when the bodies of all were submitted to examination. In the course of the experiment it had been found that, after the first month, they could only be induced to swallow the brandy with great difficulty. Under its continuance, their voices became altered, their bark being hoarse and dull ; they had trembling in the limbs, with occasional spasms and startings ; their

<sup>1</sup> *Chronisk Alkoholjukdom: Andra afdelningen*, p. 174.

muscular strength became diminished, so that they were unable to stand even to take their food; the sense of feeling was deadened, and this was especially remarked in the skin of the ears, usually so sensitive; their sleep was disturbed; they were generally listless, yet manifested an inclination to attack other dogs that approached them; their hearing was defective; their eyes were watery and expressive. At the commencement they shewed, after swallowing their dose, a peculiar liveliness, and an eagerness for food, but the appetite gradually decreased, till it changed to repugnance; yet there subsisted throughout a general tendency to the growth of fat. On dissection, the mucous membrane of the stomach was found in a state of chronic inflammation; the liver was diseased; there was chronic inflammation of the mucous membrane of the nostrils, the windpipe, and the lungs; the vessels of the brain and its membranes were distended with blood, and in one instance there was an effusion of watery fluid; the muscles were soft and flabby; and the fat was deficient in consistency. The kidneys in all were found unaltered. In certain trials, also, by Pömmel, with reference to the effects of alcohol upon dogs, the substance of the heart was found partially converted into fat.<sup>1</sup> The inference to be drawn from these experiments is unimpeachable. The dog, like man, is an omnivorous animal; and ardent spirits are no more an article of natural diet for the one than for the other. Alas for humanity! the resemblance of the effects in the reluc-

<sup>1</sup> Rösch, *Der Missbrauch geistiger Getränke*, p. 177.

) tant brute, and in the man who is reducing himself to something lower than the brute, is too strikingly identical, to permit us to dwell upon it without a sense of humiliation.

Thus the diversified proofs gather themselves from every quarter, and with a fulness and precision of evidence which has scarcely a parallel elsewhere in the science of medicine. All have pointed unchallengeably to the conclusion, that alcohol is the most widely and intensely destructive of poisons. In large and concentrated doses there are few which are more promptly and inevitably fatal. In more moderate and diluted portions, continuously repeated, it is, with its own peculiar modifications of action, obviously one of those so called cumulative poisons, of which science possesses other well-known examples in corrosive sublimate, fox-glove, and arsenic; which also may be either rapidly fatal in large quantities, or small quantities of which may be given, with a first effect far less appreciable than that of alcohol, and continued, each separate dose alike unmarked by violent symptoms, till at last the deleterious qualities become amassed in the system, and life falls a certain sacrifice if they be farther perseveringly administered. Hence it is with a really just appreciation of their effects, that spirits, as taken by the drunkard, have received their ancient and common appellation of a "slow poison;" an idea which Professor Huss has ingeniously developed, so as to systematize the greater part of their range of action. With not less truth, moral as well as physical, has gin been popularly designated as "blue ruin." That a being pos-

sesed of reason should by such means destroy reason, and a being doting on life should thus be prodigal of life, is one of those weaknesses in man which may excite the sympathies of the coldest, while it is a dishonour which may humble the spirit of the proudest.

## CHAPTER X.

### PREVENTION AND CURE.

WHAT effect the aggregate of the preceding details may produce upon my reader, it is not for me to imagine: but for my own part, as I look back upon them, and know them as true, they seem to constrain me to hold my breath for a while, with a feeling of horror and wonder. And yet, the sum of what has been here presented is only a small portion of the actual evils which result from intemperance. But it has been well remarked, that every sketch of the misery produced by strong drinks must remain far below the truth, and yet appear to exceed it. It is indeed difficult to strip such realities of their look of fable, and to comprehend all that they involve, or all with which they stand in relation.

We have here necessarily considered the question only as it affects the individual, in his own person, and in the most simple and direct manner. But what individual is there, who stands so wholly aloof from his fellows, that he cannot also spread somewhere over others the burden of his poverty, the poison of his example, the dispeace of his brawls, the shame of his degradation, and the evil and suffering of his violence? If we acknowledge, with all medical writers of eminence, that there is probably, in this country, no source of disease more fertile than a habitual excess in intoxicating liquors, what statistician

is there who will not add to its condemnation by shewing the vastness of its operations, what moralist, or minister of religion, who will question the noxiousness of its influence, or what administrator of justice who will deny its tendencies towards the fostering of the most pernicious disorder and crime? There surely lies somewhere an imperative duty, upon society, or upon governments, to aid the strenuous few who seek to arrest the diffusion of so stupendous a mischief; and it cannot be much longer held wise or becoming, in a cultivated people, to see the drunkard and his drunkenness, with their wide complexity of ruin, and yet tolerate the indecency and accept the burden.

One primary and obvious duty which devolves upon society, or upon the more intelligent portion of it, with reference to our subject, is to make provision for the dissemination, through all classes, of distinct and precise ideas regarding the pernicious effects of habits of excess. The vice must be everywhere displayed as it truly exists; and that not by merely general denunciations, but by earnest reasonings on specific facts. When once fully stripped of the false glitter which masks its initiatory stages, and its tendencies exposed with all their gross facilities of descent, the terrors of the prospect may arrest those who could scarcely have receded when once involved in the riper contamination. The reform of drunkenness must begin with the sober; and individuals may join to sustain each other in the maintenance of habits of temperance, even more than in their re-establishment when broken, through mutual encouragement and example. Hence the value of temperance, or abstinence societies, by which

both these objects have been attempted to be achieved, and, in many instances, with signal success.

Before him who is already temperate, these societies, persisting in the line of duty which they have themselves indicated, should contrive to bring unceasingly, yet ever mildly and modestly, and winningly, the admonition, that although assuredly not all who engage in conviviality become drunkards, there is yet not one who does not incur the risk ; and that the numbers who are finally involved are in reality exceedingly great. They will shew that it is indeed the peculiar distinction, as it is the chief peril of this propensity, that it contains within itself the tendency to create its own persistence. There is certainly no human desire or gratification which may not be indulged to excess ; and it has not been neglected to be urged, that the argument against the moderate use of spirits might be directed also against the moderate use of every other enjoyment. But, while no other sensuality is surrounded with such manifold facilities for its gratification, there is also no other the suffering, or the exhaustion, from the indulgence of which finds its fallacious restorative in the repetition of itself; and thus the growth of every other passion or appetite has its natural checks, which to the drunkard are wholly wanting. Hence the seductive nature of his propensity, and the necessity for the most stern resistance to its first encroachments, masked as these are by specious attractions, but assuredly not founded on any original or real want in his system.

To him, who has already fallen under these enticements, the temperance societies will proffer an ever open harbour of refuge and of safety. But as ridicule, which

few are able to bear, and which renders the shaken spirit of the drunkard desperate, is frequently cast upon those who pledge their vows to these societies, and shortly afterwards fail in their resolutions to abide by them, it would be prudent if all new members, whether the temperate who offers his example, or who merely seeks for assurance in his position of safety, or the intemperate, who sue for protection against himself, were to be admitted at first only as probationers ; and then be advanced, after the resolute experience of a year, to the full privileges of membership, with the right of vote or of holding office in the association. The originally temperate will cheerfully undergo this, on his part, supposititious ordeal, in order that the less stable may be encouraged in what to him is a real and arduous trial ; and that there may appear nothing which could be regarded as an invidious distinction between them. In case of any dereliction, the period of probation would, of course, be gladly and unhesitatingly renewed, at the desire of the defaulter. To him, who could, by this instrumentality, achieve over himself a real and enduring success, what humane or reflecting spirit would not offer its tribute of honour and respect ? "It is," says Böttcher, the leading and judicious advocate for temperance in Germany, "a great and noble thing to subdue our impulses and our inclinations ; but his victory is still greater who has conquered his desires and his passions."

To the labourer or artizan, who adopts a plea which cannot avail the rich, and who seeks in the use of spirits a means to revive or maintain his bodily strength, it will be the continued duty of the societies to teach and re-

teach the lesson, that alcohol does not contain, and therefore cannot impart, the elements of highly animalized products, such as the muscular substance which serves as the apparatus for his toil: that it has thus no real capacity either to renovate or sustain, but merely acts as the blast which provokes the flame without increasing the fuel, and so hurries and completes the waste. It is worthy the remembrance of the British handcraftsman, that the stately fanes of York, Winchester, Lincoln and Salisbury were reared at a time when neither the genius of the designer, nor the practical skill of the workman, profuse of resources and patient of labour, could be inspired by brandy. The societies will warn all, that true vigour can only be supplied, or restored, by sound food, rest, and pure air; and they will shew, from the mass of evidence which has now accumulated from every quarter, to an extent and of a quality which it would be the merest obstinacy to dispute, that in every variety of casual exposure, as in every description of labour, the powers of resistance have been best sustained by ordinary warm and nourishing drinks, and not by ardent spirits.

They will ask those who are subjected to the inclemency of the weather, to discriminate between heat itself, and its mere sensation. Spirits cannot increase the former directly, unless in so far as, taken in a moderate quantity, they may stimulate the circulation for a while, if depressed below its natural level; when they may promote the flow of the blood in the minute vessels, and hasten that interchange of particles during the progress of which heat is developed. But this is the kind of action which leads to a revulsion, and soon conducts to an

opposite condition. And indeed, the experiments of Nasse, and others, appear to shew, that even very moderate quantities of intoxicating fluids tend to diminish the temperature of the body. The main office of spirits, then, is at all times to create merely a sensation of heat, through the stimulus of their contact, like any other pungent or acrid substance; and we have already seen that, when carried to excess, they positively end by diminishing the warmth of the body in a conspicuous degree, by interrupting those changes in the blood upon which the evolution of heat is dependent. One special instance of this may suffice, and it is worth recording. Four British regiments marched from St John's, New Brunswick, to Quebec, a distance of 360 miles, during the depth of winter; the thermometer frequently ranging as low as from  $20^{\circ}$  to  $25^{\circ}$  below the freezing-point. During the march, which probably lasted from three weeks to a month, three individuals perished: one from vomiting of blood, and two from being frozen to death, while in a state of intoxication.<sup>1</sup> Yet its effects in extreme heats may be even more pernicious. "In the season that has just closed upon us," says Dr Sewall of Washington, "we have had a melancholy exhibition of the effect of intemperance, in the tragical death of some dozens of our fellow-citizens; and, had the extreme heat which prevailed for several days continued for as many weeks, we should hardly have had a confirmed drunkard left among us. Many of those deaths which came under my notice seemed almost spontaneous, and some of them took place

<sup>1</sup> *Army Statistical Reports*, by Col. Tulloch and Dr Balfour, 1853.

in less than one hour from the first symptom of indisposition."<sup>1</sup> From the experience of our own colonies, instances of a like description might be adduced to almost any extent.

It might seem that the task of the temperance societies would be completed, when they had pointed, beyond all this, to those shocks to the health of mind and body, and to that mental and physical debasement which it has been my especial province to paint in relation to the individual, and the effects of which upon the welfare of families, and the general system of society, I leave to be traced by others, in order to prove that the sensuality which has been shewn to have no real advantages to offer in compensation, is yet capable of becoming the widest and most unfailing of sources of poverty, degradation and death. In our keenly commercial times, when the most acute and persevering of intellects have been brought to bear upon questions of traffic, and when, in particular, the subject of life assurance has been made the topic of investigations, at once the most minute and the most extensive, into the causes and conditions of human mortality, it becomes important to note, that no ordinary insurance office will entertain the proposals of a drunkard.

But the temperance societies will, in reality, have made but little progress towards the completion of their aims, if they content themselves with the mere attempt to abolish a vicious indulgence, without any farther efforts to occupy the void which they are thus seeking to create in the habits of an extensive portion of the community.

<sup>1</sup> *Fourth Report of American Temperance Society*, 1851, p. 88, App.

They will rarely succeed, and this they have widely felt, even with all the force of reason on their side, in destroying a bad habit, unless they can insinuate another and a better in its place. No one now questions the necessity for the extension of a well-considered system of education for our youth; and it is to be trusted that it is to cherish no chimera to expect, that it will one day be judged infinitely more necessary to store opening minds with just rules of self-government, and with a knowledge of duty in relation to others, than with the history of the past, or with treatises or narratives regarding topics in which none have any immediate concern. A simple code of ethics prepared for this purpose, and carefully adapted to youthful capacities, inculcating with cheerful humanity the precepts upon which may be based a virtuous and manly character, will thus be deemed as fit a text-book as any which may be compiled from the more ordinarily selected resources of literature.

And after all, how little has been accomplished, when the education of the boy has passed through all its usual stages, if that of the man be not instantly commenced, and unbrokenly continued. There is no period of greater trial than that which elapses between youth and manhood: and every civilized community is bound, in common prudence, to suggest for all classes the means of pleasing yet profitable occupation, to invite the leisure of those who are traversing it; in addition to the primary education, secular as well as religious, the diffusion of which, slowly and divisively though it be approached by divine as well as lawgiver, is requisite to constitute a first basis for stability of morals. Each

should be solicited to habits of providence, and of self-dependence, by the establishment of savings banks and benefit societies ; to intellectual pleasure and improvement, and to advancement in the knowledge of their various handicrafts, by libraries and mechanics' institutes ; to agreeable and wholesome recreation in the open air, by the encouragement of a taste for gardening with its associations of gentleness and beauty ; and to a love for domestic enjoyments, by diffusing an acquaintance with those sanitary rules and conditions which, taken in connexion with the rest, render a home at once healthful and happy. Thus education will be true education ; ignorance and misery will relax their grasp of the cup ; and society will have taken heed that all its members are in that position of moral freedom (more precious than personal) in which they may see vice and crime in their proper aspects, and not with the perverted notions of a defective training, in which the wrong is known but not appreciated. To neglect to educate, is all but literally to neglect to place lights where there is the deepest darkness and the greatest danger. Doubtless, with all this, there will be but slow progress and much to dishearten ; but, as the responsibility is everywhere, the kindly pressure must be everywhere, and the perseverance unwearyed. It is only the moral charlatan who pretends, or the visionary who expects, that great and real diseases can be extirpated by a single effort, or in an instant of time.

It is difficult, in some matters, to catch the world in earnest, or to arouse its interest keenly in things apart from its ordinary pursuits of individual gain or plea-

sure. But should such efforts as we have imagined become fervent and general throughout the community, and rise into prominence as the expression of an extensively felt consciousness of a popular defect, and of the necessity for its remedy, they would soon, from the nature of our institutions, engage the co-operation of the legislature, to aid in a wholesome reaction through the influence of appropriate enactments. A recent act, regarding the vending of arsenic, recites, and very justly, that the unrestricted sale of that poison facilitates the commission of crime; and it proceeds to the enactment of a number of clauses, so stringent as to be nearly prohibitory of its ordinary retail. Yet what is this better, comparatively speaking, than that natural purblindness, which may affect legislators as well as others, and through which the attention is surprised and fixed by any object, rather in proportion to its novelty than its importance; so that the scores of cases of poisoning and death from arsenic are dwelt upon with intense anxiety, while the myriads of instances of violence and destruction from the unrestricted use of ardent spirits are, in so far as any real system of prevention is concerned, too common-place to attract notice, and are passed unheeded and uncared for? Possibly the period may arrive, though it would savour of enthusiasm to anticipate it at present, when the promiscuous sale of spirits may be absolutely prohibited amongst us. Doubtless, there will be greater security for this change, if it can be so insinuated that it shall not be forced upon the people, but that it shall be developed by the people; it being bad policy, as Montesquieu has

wisely remarked,<sup>1</sup> to change by laws what ought to be changed by customs.

In the meantime, we may gratify ourselves by imagining, that though he might be considered a bold, and possibly an eccentric, yet he might not the less merit to be a successful statesman, who would preserve the present duties on spirituous liquors, with the mechanism by which they are collected, but who, conscious that the proceeds were mainly the drainings of a canker in society, would change the titles of the acts and of their provisions, so as to designate them as purposely framed to restrict the traffic in a noxious commodity, through the imposition of charges, fines and penalties: and who would then at once stake this vice of the country against the factious turbulence, the crime and the pauperism which it chiefly engenders, by handing over the proceeds to replace the poor-rates, and to pay the cost of our prisons and penal settlements. In addition to this, the number of distilleries should be limited, that of the taverns diminished, and the minimum portion of spirits legally saleable raised to a larger quantity. There are many, doubtless, who would shrink from such a measure; yet it seems to me that it would, for the most part, be those who would refuse to comprehend its scope. It rarely appears prudent to attempt in legislation, to proceed upon a principle instead of perpetuating, or simply modifying, a routine: because the routine can always arrogate to itself exclusively the sanction of experience; as if a just prin-

<sup>1</sup> *Esprit des Lois*, b. xix, c. xxiv.

ciple, if it be really just, did not rather of itself involve the very essence of experience, in as far as the human intellect is enabled to grasp it. It would be opposed too, could we imagine it to be seriously advanced, as a limitation of commerce and industry; an objection which sounds speciously in our mercenary times: and we should be assured of its futility, because we should be told that it is the demand which here regulates the supply, while the converse proposition has no reality.

But it is folly to allege absolutely that the demand regulates the supply, unless we are entitled to assert also that temptation, persuasion, and example are void of influence. A few overgrown houses of resort would be less injurious than a hundred smaller ones. The secrecy and facility of access would be diminished; and if the gin-palace might be rendered more and more conspicuous by its splendours, these would rather repel than attract the incompletely habituated drinker, who would shrink from its open profligacy, and would naturally be shocked by the contrast between its tawdry magnificence and the misery of most of its frequenters. The supervision of the police would become an easy task, when confined within limits so narrow, and so nakedly exposed to public scrutiny; and a stigma would be thrown upon the whole traffic, in all its relations, which few honourable minds would care to encounter, and which would soon shake it to its centre. But the poverty and crime which it causes would abate as it decreased; or where poverty still subsisted, it would be infinitely less gloomy and degrading; and if a few interests might suffer temporarily, which would have been gladly spared had they been better founded, the greater

purity of the moral atmosphere would amply compensate for all collateral effects of the storm that swept away its foulness. It is, indeed, not the least unhappy trait of the traffic, that it has so wound itself among the usages of society, that individuals of unimpeachable worth and respectability have become engaged in it, and have lent the aid of their character and position to its farther diffusion. Yet who can doubt that these very individuals, in a spirit becoming their higher qualities, will be the very first to evince an anxiety to disentangle themselves from it, and from the baser associates with whom it connects them, so soon as the public mind shall display a just consciousness of the extent of its noxious and degrading tendencies? As to the more disreputable portion, it can be visited by no requital equal to the mischief it has inflicted.

But the medical jurist perceives another cogent plea for legislative interference, when, in his important province, he considers more closely the relations between intoxication and crime. Drunkenness, in itself, is not admitted in this country to be pled in mitigation of any criminal act, which may be committed under its influence; but on the contrary is held, in legal phraseology, to be an aggravation of the guilt. There appears to many to be great harshness in this interpretation of the law: yet, as drunkenness is confessedly a fertile source of offences of the most heinous description, and we are not yet enlightened enough to aim broadly and consistently at its prevention, the darker vengeance of retribution seems to be all that remains to us as a means of protection. When any criminal act has been performed, in order to

infer complete accountability, there must have been the capacity to distinguish its nature, its motives, and its consequences to perpetrator and sufferer, together with its criminality with reference to the laws ; and along with this there must have been freedom of will and of judgment in the agent to proceed or abstain at discretion. But intoxication, we have seen, is a series of modified actions and conditions of the nervous system, accompanied with corresponding states of the intelligence, in which there is at first excitement, afterwards incoherence, and lastly stupefaction ; so that there ensues, by a gradual cumulative process, deprivation of self-control and of reason, and finally of consciousness : the individual, it might have been added, being designated, in common language, according to these various grades, as tipsy, drunk, or dead-drunk.<sup>1</sup>

Under this definition, the drunken man cannot be held responsible, in any strict sense, for his actions while drunk, but only for his drunkenness. Violence is the incidental, but not the necessary or contemplated result of intoxication, as it is of revenge or of other passions in which the moral will is implicated ; and it has thus justifications which the others cannot plead. It is true that there is a principle in law, that if an individual has wilfully placed himself in a condition through which wrong accrues to another, he is liable for that wrong. But the drunkard, to adapt an expression of Hobbes, has not his future will in his own present power : he does not foresee the criminal consequence of his excess as any infallible, or even probable contingency ; and, when the drunken-

<sup>1</sup> Hoffbauer, *Die psychischen Krankheiten in Bezug auf die Rechtspflege*, 1844, p.

ness is once established, and the capacity for self-guidance and for reflection is destroyed, he cannot comprehend its danger. To punish him for his crimes, therefore, is, for the most part, to punish him for what he never intended, or contemplated as a possibility. In this sense, to condemn for a murder committed under the false impressions of the drunkard, is but another form of constituting drunkenness a capital crime.

The unsupported testimony of a witness, who was known to have been intoxicated at the time of an occurrence upon which he was required to speak, would be rejected in every court; yet the drunken man would be held responsible for actions, committed by himself, equivalent to those with reference to which he would not be considered competent to testify. Yet surely, if a man was in no condition to judge of these actions in others, he was in no condition to judge of them in himself; and his perceptions would be as defective with regard to his relations towards them, as with regard to their relations towards him. Would it not be fair to maintain, then, that that which excludes a man from court as a witness should exclude him as a culprit? It is unhesitatingly admitted, that where excess is followed by an attack of delirium tremens, or where the drunkard's habits have permanently weakened his intellect, or rendered him a confirmed maniac, his accountability ceases. But how are all the gradations to be defined through which the insanity is established, or what is the drunken condition itself but a state of temporary derangement, and why should we give validity to that when remote, which we refuse to recognize when immediate? Many other forms

of madness are caused by an uncontrolled indulgence of other appetites and passions, yet who, under these circumstances, imputes responsibility to the maniac, because the production of his insanity has been by his own act ; and if this be just of the more permanent condition, why should it not be just also of that which is transient ? Even the tipsy man, excited, headstrong, easily provoked, and regardless of provoking others, with his deliberation weakened, and his imagination prevailing over his judgment, yet without the latter being seriously impaired, is scarcely a perfectly accountable being.

Could it be shewn, however, that a man had intentionally intoxicated himself in order to perpetrate a crime, and use the intoxication as a pretext afterwards for excuse and irresponsibility, the justice of his condemnation would be apparent. But, though it must be admitted that, if a person drinks while under the influence of anger, as of any other passion, and keeps his cause of resentment steadily in view, his potations, instead of soothing him, are likely to foment his rage till it kindles into violence, still there must appear always something inconsistent in the idea, that any one, under ordinary circumstances, would begin what might prove a difficult and hazardous enterprise by wilfully unfitting himself for forethought and regulated action ; and it is plain that no intoxication to a less extent than this could avail as a plea. And even here, it might not be too great a refinement to maintain, that it is less the state of the man prior to the perpetration of the act, than that in which it was really perpetrated, which ought to be considered ; for if he was irresponsible at the time of acting,

his previous responsibility could not weigh so much; as he might have relented had his judgment remained unshackled.<sup>1</sup> Such a man would assuredly be very guilty, yet his guilt would be to a certain extent qualified; and it is his design which should be considered with reference to punishment, rather than the manner in which it had actually been accomplished. The mere drinking, carried designedly so far only as to excite temporary vigour and determination, but not so as to induce incoherence, and kept far within the limits of actual intoxication, can not only serve as no plea of justification, but is not even in question here, and must be deservedly held as a gross aggravation of a criminal act.

Should the drunkenness be involuntary, that is, caused by the fraud of others, as by mixing drinks secretly, or should it have been produced by any peculiar or accidental circumstances in the individual himself, or in the situation in which he had been placed, there would naturally be entire freedom from accountability, and we need not comment upon such a position farther than to note the possibility of its occurrence. One thing, however, is indubitable: that the confirmed drunkard, even in his sober intervals, shews frequently a marked tendency to criminal actions, through the perversion of his moral feelings, and, not rarely, through a sullenness which has grown habitual. No one requires more rigidly the vigilance of the police, than a character which self-degradation has so deeply embittered. On the other hand, crime gives rise to much drunkenness. The social outcast

<sup>1</sup> Rüsch, *der Missbrauch geistiger Getränke*, p. 825.

drinks to deaden conscience, or to outbrave contempt.

The scope of these arguments, and they have none other, is to shew, that as the drunkard, under any reasonable view, is usually to answer for his drunkenness, rather than for what he may perpetrate under it, it is the duty of preventing the vice itself which is peculiarly imposed upon society. We repeat that we are still, if but through pure expediency, in no position to reject the aid of penal enactments against its possible consequences, and scarcely even to relax their severity : although we lean somewhat towards that policy by which the codes of other nations are gradually becoming more merciful in their views of similar questions, and possibly, on that account, more just. Several of the states of Germany, for example, have shewn themselves willing to admit drunkenness as a plea against full responsibility for crime ; and the Austrian criminal code lays down the rule, and attempts to assign its limits, with great exactness. But the drunkenness which gives rise to a crime is here in itself justly regarded as an offence, and is punishable with from one to three months imprisonment ; or where the offender was conscious that in his drunkenness he became habitually prone to paroxysms of violence, the imprisonment might be extended to six months.<sup>1</sup> But we may, at least, ourselves render the intervention of an extreme rigour a matter of less frequent necessity, if we cannot refuse to admit it to be occasionally expedient, or even indispensable. This is to be accomplished by aiming

<sup>1</sup> Fröhwald, *Handbuch des Oesterreichischen Strafgesetzes*, Wien, 1852, pp. 28, 323.

steadily towards that system of prevention of which we have already traced the outline, and by which we may hope to make the practice of the vice everywhere less easy, and above all, more contemptible, and its tendencies unmistakable and abhorred. If any more direct restrictions could, for the present, be adopted, without proving inoperative or even mischievous, let them, at least, be so directed that they shall not appear to confer upon the drinker the counterfeit dignity of a martyr, when the position which he seeks for himself is that of a self-debaser and a dupe.

It is true there is a limited, yet still too large a class of drunkards, who never seek reform, and to suggest it to whom is only to provoke their surliness and their obstinacy. If reform be difficult with the conscious and struggling victim, it is hopeless with the other. The grave yawning at his feet is nothing, and the world beyond is nothing. Yet even this man would feel the force of example. Make his vice, in all its gradations, a rare one, and he will be ashamed, and shrink from it: as men rush mechanically with the throng, who would not move a step on a path which they were to tread alone; or as they are more easily attracted by virtue than repelled by vice. If stronger means, however, be wanting to constrain him back to duty and to reason, there are still measures which society may be finally compelled to adopt to maintain its own purity and peace; as well as, in charity to the drunkard himself, to protect him, and those with whom he is bound in the ties of family, from the ruin of his excesses; though these measures have hitherto been so wielded as to have usually little force or adequacy. It might be well, if the spirit of our laws

could yet be induced to sanction, more readily, and more efficiently, some such denunciation as that which was customary with the ancient Roman *prætor*: "Since by thy vice thou destroyest the inheritance of thy father and thy ancestors, and bringest down thy children to poverty, for that cause I interdict thee from its use and government."<sup>1</sup>

As to that part of the cure of the drunkard which depends immediately upon himself, it must rest solely upon his own employment of such energies, and power of self-control, as the remnant of his reason can place at his disposal. It can be no wonder, therefore, that the prospect of success is usually a slight one, and that few confirmed drinkers ever possess sufficient fortitude to redeem themselves permanently. Lippich computes that about five per cent. may appear to have returned to temperate habits;<sup>2</sup> and I fear this must be admitted to be the full proportion. Still, it is pleasing to remember, that recoveries from the most abject conditions have occasionally been witnessed; nor ought we to banish the hope, that under better auspices, and with more lively sympathies from without, such instances might be multiplied. One case I recollect, of an individual, who would strip himself of his shirt, when in the midst of his orgies, to procure the means for gratifying his insane cravings; and who found readily, among the keepers of the petty tippling-houses, persons mean enough for so base a traffic. Yet this individual became thoroughly reformed, and for many years continued rigidly abstinent, till he died at a ripe age.

<sup>1</sup> *Heineccius, Antiq. Roman Juris p. illustrant Syntagma* (ed. iv.), P. I. p. 225.

<sup>2</sup> *Grundzüge der Dipsobiosstatik*, p. 71.

It is manifest that, in weaning from the habit, no particular method can prevail so much by any merit of its own, as by the tenacity of the resolution which has given it origin. The main difficulty lies in inducing that degree of firmness which is requisite for a proper trial; and perhaps this will usually be best elicited and sustained through the assistance of some judicious friend, who will strive to win the drinker's confidence, and secure an ascendancy over him. It will be prudent to look upon the habit as a disease, which must be treated with compassionate consideration; the causes and conditions of which are to be investigated, and heedfully resisted, and not expected to be the easy conquest of an admonition or a reproof. If the constitution have already materially suffered, it must be sought to be carefully renovated. The moral cure can have little efficacy, till the physical one is duly established; and he who drinks to quiet uneasy sensations, of whatever description, must have these soothed, and must be enjoined patience till they are soothed, by the suggestion of some other means which may be at once more innocent and more enduring. We must lift him from his state of mental prostration, and hush for him the pains of reflection over all that he has lost, destroyed, or neglected. We may perhaps succeed in rousing him by appeals to his nobler passions and affections; or may keep him from preying upon himself by engaging him in occupations adapted to his position; or by enlarging his connections with the outer world, through its impressions and influences.

If the individual, assisted or unassisted, can succeed in this, he has then some groundwork upon which to com-

mence what must still be, probably, a period of severe probation. A resolution to maintain an immediate and total abstinence will be his easiest recourse. He need not dread the effects of this upon his general health ; for everything has tended to shew that there can be no possible foundation for the idea, preposterous and yet partially current, that the system can be so habituated to intoxicating drinks as to confer upon their use the indemnity of a second nature. It is only, we have already seen, in the more serious diseases of drunkards, and in but few of these, and chiefly, it seems reasonable to add, in such as are not the absolute results of his drunkenness, that there can be any question as to the risk of a sudden abstraction of the intoxicating fluids ; and cases of this description will naturally be under the direct superintendence of a medical practitioner. Indeed, it is worthy of remark, that the terror excited by a dangerous disease, which the drunkard has been brought to recognize as the result of his habit, has served, along with the abstinence which has been enforced during its treatment, as the first step, in not a few instances, towards a permanent reformation.

In attempting to break off by slow degrees the habit of drinking, the virtue of self-denial in the individual would be put to a test infinitely more severe than any which his constitution would suffer by breaking off at once. Abstinence has a defined and positive limit, but that of temperance is fixed nowhere. Indulgence in one glass leads to indulgence in another. The drinker feels himself, as usual, soothed by his drink ; and as he recurs to it, oscillating between remorse and recklessness, he defers till to-morrow the trial of that greater abstemious-

ness which he admits to be necessary, but knows to be difficult, and ever trusts that a day later, and still a day later, will make little difference. By this juggling with his conscience, he aids in confirming the habit which it would have been more prudent to have relinquished at once ; and his recovery, meanwhile, is generally rendered more distant, more the spoil of temptations, and more hopeless. If he determine, however, to adopt some gradual method of abstinence, there is perhaps none which will be more easy, and more likely to prove effectual, than that of setting aside a quantity of spirits, let it be a gallon or a quart, with the resolution, that for each dram he drinks he shall add to the stock a like portion of water, so that the progress of his cure may keep pace with that of the dilution. Should all else fail, the use of some description of ironical or contemptuous treatment, though by no means generally a safe expedient, has occasionally brought the drunkard to a sense of the shame of his condition. It is perhaps upon a principle of this nature, that the peasants, in certain parts of the continent, are accustomed to lay their sots, when thoroughly drunk, in a dunghill, to remain there till the effect of their carouse has subsided.<sup>1</sup>

Or some method may be adopted, by which intense disgust may be excited against the intoxicating drinks themselves. We shall scarcely now be likely to resort to the cure of mixing crushed toads with the toper's brandy, which Brückmann assures us has been adopted in vain ; or to dilute it with water in which a dead body

<sup>1</sup> Rösch, *Der Missbrauch geistiger Getränke*, p. 215.

has been washed, or to present the cup clutched in the hand of a corpse, which the older writers assure us have also been employed without success;<sup>1</sup> and which we may at least receive as evidences of the character of a propensity which was considered baneful enough to justify a trial of such hideous remedies, and yet was obdurate enough to refuse to yield to them. But we might essay the plan which has been adopted, and to which we have already made a slight reference, of impregnating with a third of ardent spirits every article of diet, whether of food or of drink, without exception, which was presented to the drinker; so that, tasting them in his tea, in his soup, upon his meat, and among his vegetables, the favourite liquors, thus unceasingly proffered, might shock the sense of taste, pall upon the appetite, and ultimately excite repugnance and nausea. This result is usually attained within about five days of the treatment; but the plan must be rigorously continued for some time longer, until the patient can no longer, by any effort, gulp down the mixture, when his cure is completed.<sup>2</sup> The idea of such a plan, however, implies the entire subjection of the individual to the superintendence and authority of others, and it could rarely admit of application under the domestic roof. Besides, though a large degree of success has been attributed to the method, it is not without its dangers, and has sometimes induced delirium tremens, and sometimes led to fatal apoplexy; while the permanency of the result, even when at first favourable, has been found to be doubtful. Indeed, if the details of these plans

<sup>1</sup> Flouquet, *Litteratura medica digesta*, t. II. p. 2.

<sup>2</sup> F. Nasse, *Over de geneeswijze van dronkaards*; (Dutch ed.) Utrecht, 1852, p. 17.

of cure prove anything, they prove the infinitely greater merits of methods of prevention.

Where a change of residence and of scene can be voluntarily adopted, I have occasionally known it to be attended with the most desirable consequences. The customary boon-companions, perhaps the influence of some agreeable but pernicious leader of the habitual revels, the old associations, are cast off and abandoned; and the drinker stands free to retrieve himself and his hopes within a new circle of society and of occupation. Whether the community, looking upon the confirmed drunkard as always more or less insane and dangerous to its safety, and desirous of shunning the indecency, as well as the dispeace and damage, of his conduct, passing beyond the mere guardianship of his property, may ever be compelled to assume to itself more generally the power, when it has failed with all other methods, of placing him under peremptory personal restraint in some appropriate institution, in part to hide his reproach, or to check his mischief, or, still better, to effect his cure, is a question which possibly at some early period must be answered in the affirmative.

We thus bring to a conclusion our remarks upon this important subject. We have necessarily made no attempt to embrace the whole of its possible range; for, as there is not an alteration of health incident to the human body which intemperance may not create, foster, aggravate, or render more certainly and speedily fatal, the theme would have been boundless, and the facts might have been occasionally too indefinite to fix attention. But the cat-

alogue is sufficiently terrible which includes all that it notoriously does cause, and that which, either by direct proof, or by implication as strong as proof, can have no other origin. Sometimes it has appeared difficult to give to the subject the subdued tone of reasoned truth which seemed proper for its treatment: and when we have reflected upon the tens of millions which are lavished annually upon the pernicious sensuality of intoxicating drinks, and on the less noxious, but even more paltry, indulgence of tobacco, by a nation which yet frequently writhes uneasily under charges directed to the noblest purposes of humanity and civilization, the consciousness oppresses us, that not even the most morose of satirists, embittered against the follies of his race, could have feigned against it any more severe invective than is conveyed in so plain a reality.

We pride ourselves, as a country, upon our liberty, and not without justice; yet it would be well if it were more remembered, that there is one liberty which the human race would desire to see denied to every class of every people: the liberty of making themselves slaves. So long as such a stain is so endured upon the national character, all efficient testimony unites to prove, that we must be content to be ruled by laws instead of morals, and appear to owe the bulk of our virtues to our code.



## I N D E X.

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- Abstinence, sudden, from spirits, not dangerous, 115, 215.  
Accidents, fatal, consequent on intoxication, 35.  
——— ordinary, aggravated dangers of, 104.  
*Addison*, on drunkard, 148.  
Age, in relation to intemperance, 40.  
Aged drunkard, pernicious example of, 64.  
Alcohol, the intoxicating ingredient of all liquors, 13; poisonous effects of, 87; absorption into system, 151.  
*America*, insanity from drunkenness in, 122.  
Apoplexy, caused by intemperance, 18, 78, 168, 172.  
*Aqua vitae*, original introduction of, 11.  
Arsenic, restricted sale of, 203.  
Arteries, diseased changes in, 78, 171, 173.  
Asphyxia, from poisonous doses of alcohol, 150.  
*Austrian* criminal code, on crimes from drunkenness, 211.  
  
Barbarism, ancient, drunkenness inherited from, 8.  
Benefits, falsely alleged, of occasional intoxication, 33.  
*Berkeley*, Bishop, observation on aged drunkards, 64.  
*Berlin*, insanity from drunkenness in, 122; suicides, 144.  
Bile, depravation of, 159.  
Blood, deterioration of, 150, 160, 162, 176.

- Blue ruin*, 192.  
Bone-setter, anecdote of, 31.  
Brain, localized effects in, 28; action upon, 29, 150, 167, 174; risk of drinking in tendency to disease of, 19, 34; appearances in, after death, 170; watery effusion, 170; atrophy of, 171; congestion, 171; inflammation and abscess, 172; softening, 173; effusion of blood upon, 176.  
Breakfast, frequent, of Scotch drunkard, 57.  
*British army*, suicide in, 142.  
*Brunswick*, insanity from drunkenness in, 124.  
  
Cancer of stomach, 153.  
Career of drunkard, variations in, 63.  
*Casper* on drunken suicides, 144.  
Casual intoxication, phénomena of, 28; how produced, 29; various forms of, 28, 29; perils of, 35; homicidal tendency in, 127; suicidal, 140.  
Causes of drunkenness, 38; necessity for obviation of, 50, 200, 214.  
Character of drunkard, perversion of, 60, 210.  
Children, fatal effects of spirits on, 88.  
Cholera, liability of drunkard to, 104.  
Chyle, perversion of, 73.  
*Clarus* on drunken outcast, 65.  
Climate, influence of, 9, 48, 199.  
Cold, deficient power of resistance of, 198.  
Combustibility, increased, of human body, 92; general phenomena of, 93; examples, 94; analysis of cases, 99; how originated, 99; analogous instance, 101; explanation of phenomena of, 183.  
Conclusions, principal from pathological inquiry, 187.

- Conviviality, enjoyments of, 15; risks to health, 18; tendencies of, 24, 196.
- Convulsions, 62, 67.
- Culture and race, influence of on drinking habits, 9.
- Cure, 213; proportion of success, 213; by immediate abstinence, 215; by gradual abstinence, disadvantages of, 215; plan for, 216; antiquated modes of, 216; brandy, or satiating cure, 217; cure by seclusion, 218.
- Dahlström*, experiments on dogs by, 190.
- Death-bed of drunkard, 62, 65.
- Decay, modifications of, 63, 85; rapid progress of in youthful drunkard, 91.
- Delirium of exhaustion, use of wine in, 117.
- Delirium tremens*, 59; phenomena of, 110; gloomy nature of delusions in, 111; examples, 112; caution in administering spirits in treatment of, 115; mortality from, 105, 108.
- Denmark*, insanity from intemperance in, 125.
- Diaphragm, rheumatism of, 85.
- Diet, defective, influence of, 46.
- Digestion, disorder of, 18, 21, 32; depravation of, 46, 57, 73, 160; special affections, 69.
- Dipsomania*, 131; exemplified, 133; questionable nature of, 134.
- Disease, alcoholic stimulants in, 19, 21; caution regarding, 23.  
— general, collateral effects of in constitution of drunkard, 103, 218.
- Dissections, changes discovered on, 149.
- Drams, 46.
- Drinking tankard, old, 8.
- Dropsy, 76; remarkable case of, 86.

- Drunkards, proportion of to population, 106, 107; responsibility of for crime, 206.  
Drunkenness, mortality from, 105.  
Dunghill, sots laid in, 216.
- Education, preventive efficacy of, 201.  
Emaciation in advanced drunkard, 59, 161.  
Emergencies requiring use of spirits, 21.  
Employments, sedentary, influence of, 44.  
*England*, insanity from drunkenness in, 123; suicide, 145.  
Epilepsy, 67.  
Example, influence of, 49, 205, 212.  
Excess, gross examples of, 52.
- Farr* on suicide from drunkenness, 142.  
Fasting, with intemperance, detriment of, 19.  
Fat in blood, 160, 164.  
Fatty degeneration, 160, 179; a leading and characteristic effect of drunkenness, 187.  
Feebleness of advanced drunkard, 60.  
Female drunkards, 42; mortality of, 105; mental derangement of, 125; suicides, 145.  
Ferocity, drunken, 127.  
*Fins and Laps*, intemperance of, 9.  
Fire-raising, 128.  
*France*, insanity from drunkenness in, 121; suicides, 146.  
Furious excitement of drunkard, 118.
- Gains, irregular, favour drunkenness, 45.  
Genius in relation to intemperance, 39.  
*Germans*, ancient, intemperance of, 4, 6.

- Gilda, ancient, drinking practices of, 6.  
Gout, 18.  
*Göttingen*, insanity from drunkenness in, 122.  
*Greeks and Romans*, temperate habits of, 1.  
*Gregory*, Dr, on noxiousness of intemperance, 33.  
Gullet, affection of, 70, 71.
- Habitual intoxication, 37 ; causes, 38 ; progress, 52.  
Hallucinations, 59 ; exemplified, 111.  
Head, injuries of, influence on habits of intoxication, 118 ; promote suicidal tendency, 141.  
Heart, effect of moderate drinking on, 18 ; risk of intoxication in tendency to disease of, 34 ; action of prolonged intemperance upon, 79, 166.  
Hereditary disposition to intemperance, 49.  
*Holland*, insanity from intemperance in, 124 ; *Ramaer* on suicide in, 142.  
*Hufeland*, on character of drunkard, 148.  
*Huss*, on chronic poisoning from alcohol, 192.  
*Huydecoper*, on homicidal fury of intoxication, 127.  
Hypochondriac, becomes drinker, 44.
- Idleness, influence of, 45.  
Imbecility, 61, 129.  
Incapacity of drunkard, 58.  
Incoherence, 118.  
Indirect effects of intemperance, 103.  
Insanity, permanent, of drunkard, 119 ; frequency of, 120 ; in females, 125 ; woman a passive victim, 126 ; homicidal, 127.  
Instantaneous death from spirits, 88.  
Insurance offices reject drunkard, 200.

- Intemperance little noticed by ancient medical writers, 1.  
Intestines, disorders of, 73, 154.  
Intoxicating liquors, effects of moderate quantities of, 15 ; of large doses, 87 ; appearances on death after poisoning by, 150.  
Intoxication, phenomena of, 26 ; how induced, 29 ; after consequences of fit of, 32 ; casual dangers of, 35.  
*Ireland*, relative intemperance of sexes in, 42.  
*Italy*, modern, intemperance in, 3 ; insanity, 124.
- Jaundice, 74, 76.  
*Jews*, remarkable sobriety of, 146.  
Jurisprudence, medical, considerations regarding, 206.
- Kidney, disease of, 77 ; fatty degeneration of, 179.
- Labour, exhausting, influence of, 45.
- Legislature, probable co-operation of, 203.
- Life, period of, most prone to intemperance, 40 ; average duration of, in drunkards, 106.
- Limbs, tremors of, 58.
- Lippich*, statistical observations of, 41, 105.
- Liquors used by ancients, 10.
- Liver, diseases of, 74 ; action of drinking habits on, 156 ; appearances in after death, 157.
- Lungs, affections of, 80 ; action of alcohol on, 152, 163.
- Male sex, most prone to intemperance, 41.
- Maternal care, beneficial influence of, 50.
- Melancholy, 43, 118.
- Mental disorders, 110.

Moderate drinking, risks from, 18.

Morning drinking, pernicious, 19.

Moral feelings, perversion of, 60.

Mortified bed-sores of drunkard, 62.

Mortification of stomach, 154.

*Nelson*, statistical observations of, 41, 107.

Nervous suffering, as cause of intemperance, 43; as effect, 62.

*New York*, drunkards perished in streets of, 83; insanity from intemperance in, 124.

*Norse* drinking customs, 5.

*Norway*, insanity from drunkenness in, 125.

Nose of drunkard, 80.

Obesity of drunkard, 56, 160.

Occupation, in relation to intemperance, 44, 202.

Offspring of drunkard, 106; frequently idiotical, 130; scanty numbers of, 106, 109, 131.

Old age, slight demand of for stimulants, 23.

Outcast, drunken, 65.

*Paley*, on habitual drunkard, 148.

Palsy, 79; progressive, of insane, 130, 174.

Pauperism in relation to intemperance, 45.

Physicians, illustrious, admonitions of, 33, 147.

Physiological Pathology, 149.

Poisoning, immediate, spirits a cause of, 87; slow, 192.

Popular use of spirits as remedy, evils of, 20, 83.

Prevention, 195.

Progress of drunkard, 14, 24, 26, 36, 52, 63.

- Pulmonary consumption, 80; catarrh, 84; inflammation, 84.
- Qualities, social, influence of, 43.
- Quantities consumed by drunkard no standard of culpability, 52.
- Quetelet*, on relative intemperance of sexes, 42.
- Races, extinction of, 109.
- Reform of drunkard, 212.
- Regimen, influence of, 46.
- Relative liability to disease in drunkard, 103.
- Residence, change of, as means of cure, 218.
- Responsibility, legal, of drunkard, 206; where drunkenness involuntary, 210; plea for prevention, 211.
- Restorative powers falsely imputed to spirits, 46, 160, 198.
- Restricted sale of spirits, 203.
- Restriction, personal, of drunkard, 212, 218.
- Risks attending use of spirits as remedy, 23, 115, 118.
- Roman prætor*, denunciation by, 213.
- Rural labour, favourable condition of, 45.
- Russia*, insanity from drunkenness in, 123.
- St Gertrude*, singular devotional expressions of, 6.
- Salerno*, rule of school of, 32.
- Sanguineous temperament, influence of, 38.
- Sclavonic* races, intemperance of, 9.
- Scotland*, insanity from drunkenness in, 123; suicide, 140.
- Seductiveness of drinking habits, 15, 24, 196.
- Sex, influence of, 41; relative intemperance of, 41.
- Shaking delirium, 59.
- Shock from large doses of alcohol, 151.

- Skin of drunkard, 56, 61; diseases of, 79.  
Sleep of drunkard, 58.  
Special results, constitutional, 67; mental, 110.  
Spirits, varieties of, 12; adulteration, 12; test of purity, 13; use unnecessary in health, 18.  
Spleen, affections of, 181.  
Spontaneous combustion, 92.  
Statistics of intemperance, imperfection of, 105; of insanity, 120.  
Stomach, effects of moderate drinking on, 18; remarkable distension of, 72; of drunkard, after death, 152; ulceration, 70, 153; contraction, 153.  
Stupidity, mental, of drunkard, 129.  
Stupor of intoxication, 30; its dangers, 36.  
Suicide, 136; forms of tendency to, 137; premeditated, 137; unpremeditated, 140; relations to intemperance, 142; modes of perpetration, 146.  
*Sweden*, insanity from drunkenness in, 122; suicide, 143.  
*Swedish* workmen, habits of, 54.  
System, living, leading characteristics of results of intemperance on, 187.  
  
Tavern-keepers frequently become drunkards, 44.  
Taverns, necessity for diminishing numbers of, 204.  
Temperament, influence of, 38.  
Temperance Society, mediæval, 7; existing societies, functions of, 196.  
Temptation, influence of, 205.  
Tendencies, latent, to disease, developed by moderate drinking, 19.  
*Teutonic* races, intemperance of, 4.

- Tissot*, on death of drunkard, 147.
- United States* army, mortality from intemperance in, 108.
- Unwholesomeness of dwellings, influence of, 47.
- Urine, incontinence of, 62, 78.
- Veins, affections of, 79.
- Vigour in drunkard, false semblance of, 56, 160.
- Vital statistics of intemperance, 105.
- Voice, deterioration of, 85.
- Vomiting, 61, 70.
- Warm climate, intemperance in, 10; especially pernicious, 109, 199.
- Water-brash, 71.
- Whining drunkard, 30.
- Wiseman*, a water drinker, 22.
- Youth and infancy, dangers of spirits to, 88.
- Youth, culture of, 201.
- Youthful drunkards, 40; rapid decay of, 91.

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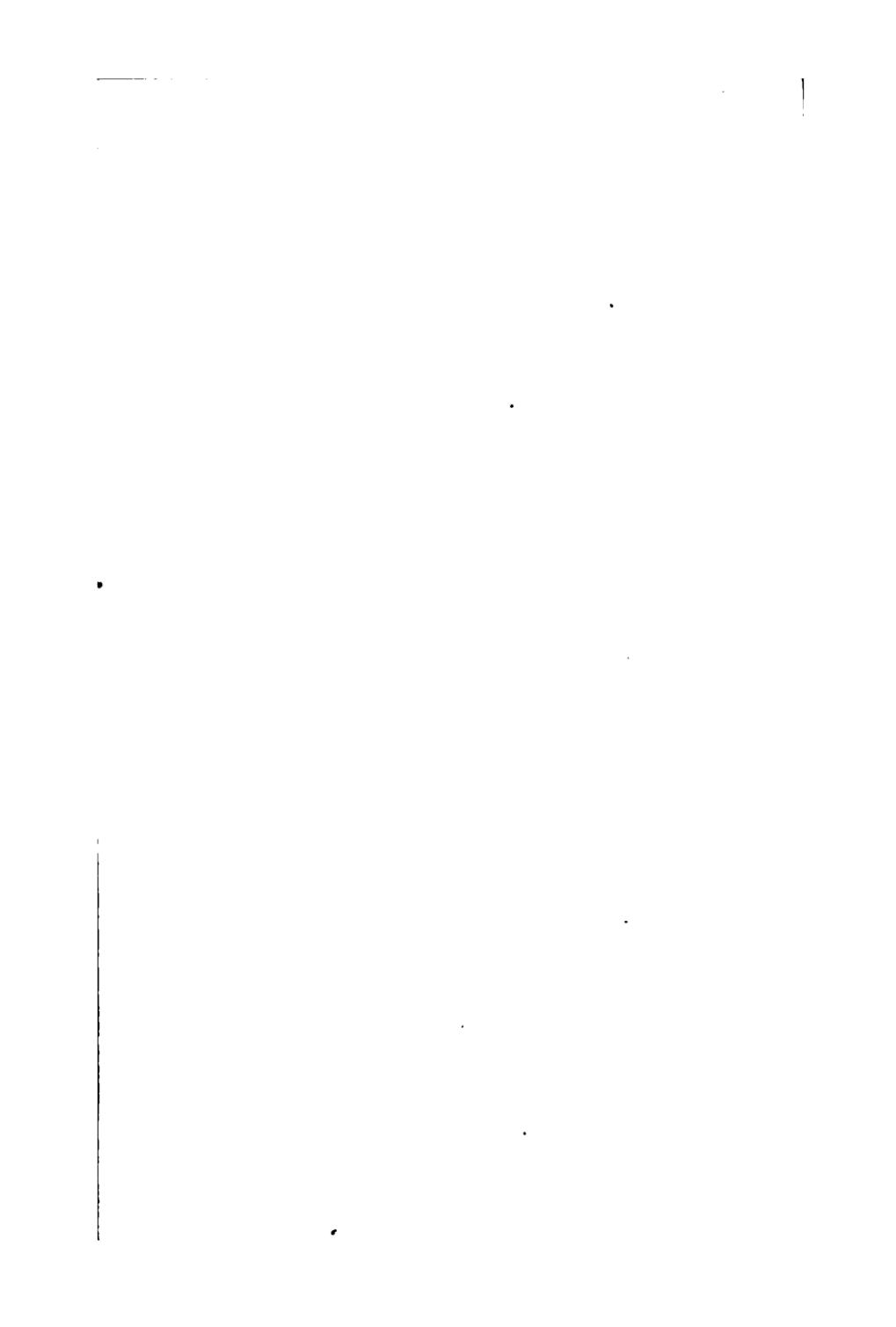
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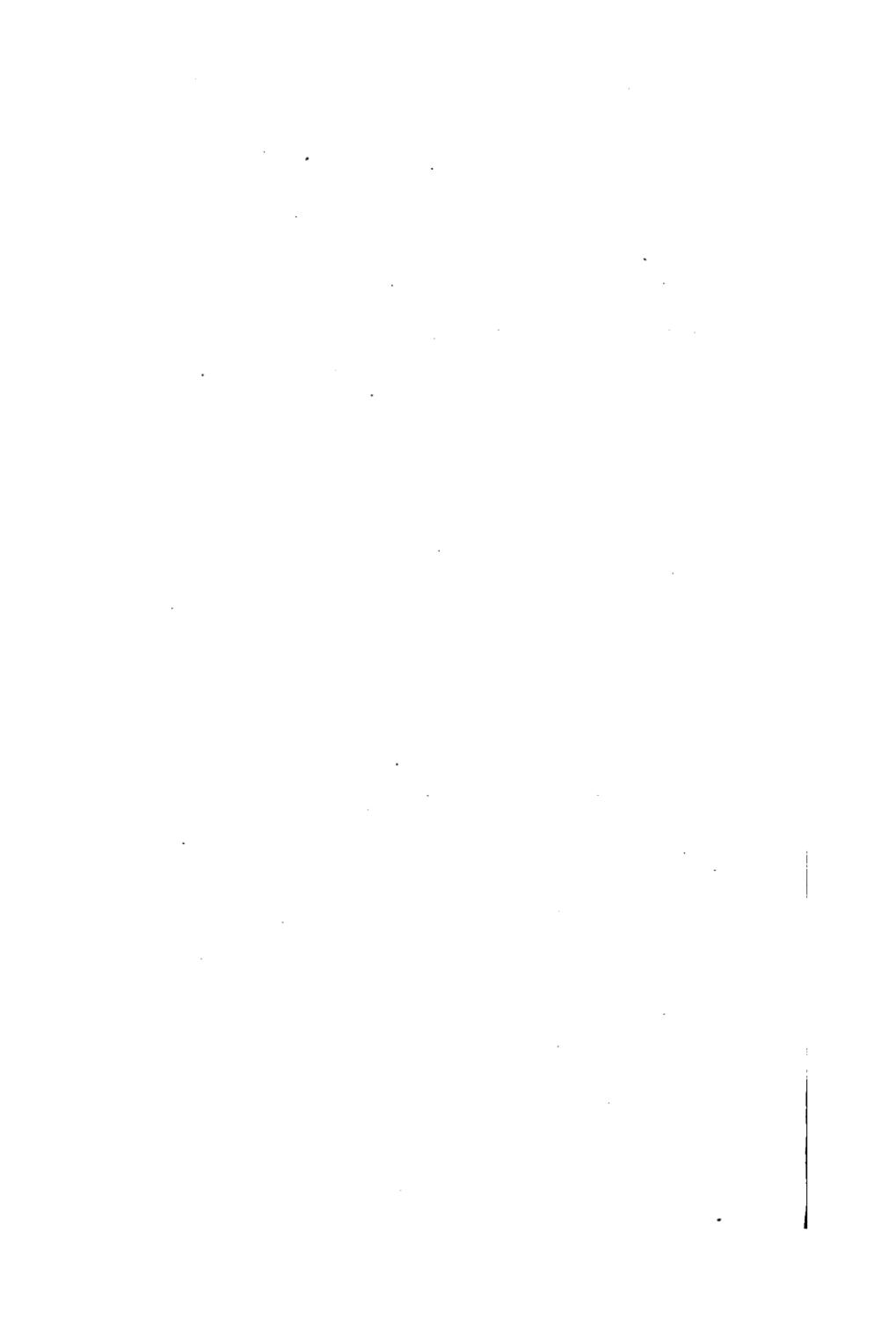
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